

2.0

Future Land Use Element

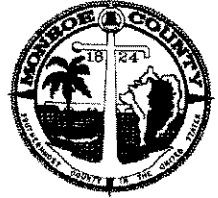


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2.0 Future Land Use Element

The purpose of the Future Land Use Element is to evaluate existing development patterns and potential constraints to development in order to determine and describe what development will occur in Monroe County over the planning horizon of this Comprehensive Plan, where this development will be located, and through what mechanisms this will be accomplished. This planning effort for Monroe County has been guided by the following principles:

- (a) Monroe County should manage future growth to enhance the quality of life for and ensure the safety of Monroe County residents and visitors;
- (b) Monroe County should provide adequate public facilities and services to support existing and future development; and
- (c) Monroe County should direct growth to lands which are intrinsically most suitable for development and should encourage conservation and protection of environmentally sensitive lands.

2.1 Existing Land Use

The existing patterns and trends of development in Monroe County have been used as the basis for determining future development potential and are evaluated in this section. The pattern and mix of existing land uses is indicative of the market forces and natural resource constraints which have shaped existing development and are likely to influence future growth. In addition, existing levels of development have been used to evaluate the adequacy of public facilities and services to serve this development and to identify potential carrying capacity constraints.

2.1.1 Existing Land Use

A generalized Existing Land Use Map series has been developed by the Monroe County Growth Management Division as representative of the existing pattern of development in unincorporated Monroe County. The existing land use data for Monroe County is summarized in Table 2.1. It should be noted that the measurement of land areas in Monroe County is not exact. The unique environmental character of the area, especially the large areas of mangrove-fringed shoreline and numerous small islands, many of which are below the mean high water line, makes an exact land area inventory difficult, simply because defining "land" in Monroe County is difficult. The calculation of acreage's of land use types provides an approximation of the land area of each of the land use categories, and is useful in determining the conditions as they presently exist.

As indicated on Table 2.1, the total area for the unincorporated portion of the Keys is approximately 61,343 acres. This inventory does not include waterbodies or offshore islands, which are discussed in detail in Section 2.1.3 below. As indicated, almost two-thirds of the County is either owned for

Table 2.1

Monroe County Existing Land Use (acres) (1)

	Upper Keys	Middle Keys	Lower Keys	Total	Percent of Total
Single-Family	3,391.0	2,037.0	2,950.9	8,378.9	13.7%
Mobile Homes	618.9	130.8	313.1	1,062.8	1.7%
Multi-Family	391.6	220.9	25.2	637.7	1.0%
Mixed Residential	201.5	158.3	351.1	710.9	1.2%
<i>Residential Subtotal</i>	4,603.0	2,547.0	3,640.3	10,790.3	17.6%
General Commercial	462.1	276.6	255.4	994.1	1.6%
Commercial Fishing	10.7	84.6	151.8	247.1	0.4%
Tourist Commercial	421.1	460.5	147.3	1,028.9	1.7%
<i>Commercial Subtotal</i>	893.9	821.7	554.5	2,270.1	3.7%
Industrial	81.7	55.2	377.9	514.8	0.8%
Agricultural/Maricultural	0.0	41.9	0.0	41.9	0.1%
Education	65.8	31.7	8.9	106.4	0.2%
Institutional	46.2	37.3	32.8	116.3	0.2%
Public Buildings/Grounds	11.3	32.6	16.9	60.8	0.1%
Public Facilities	36.1	446.2	56.8	539.1	0.9%
Military	0.0	0.0	3,288.7	3,288.7	5.4%
Historic	0.0	0.0	0.5	0.5	0.0%
Recreation	351.2	940.7	499.4	1,791.3	2.9%
Conservation	11,542.6	623.1	8,530.0	20,695.7	33.7%
Vacant	5,123.1	2,882.5	13,121.6	21,127.2	34.4%
Total	22,754.9	8,459.9	30,128.3	61,343.1	100.0%
Percent of Total	37.1%	13.8%	49.1%	100.0%	

(1) Existing land use for the Florida Keys portion of unincorporated Monroe County.

Does not include waterbodies or offshore islands.

Acreages derived from measurement of land uses shown on the Existing Land Use Map series.

Source: Monroe County Growth Management Division, 1991.

Wallace Roberts & Todd, 1992

conservation purposes or is vacant. Of the developed land uses, single-family residential is the largest land use category, representing approximately 13.7 percent of the County.

Data regarding the general range of density or intensity of use for Monroe County has been obtained by the Monroe County Growth Management Division from the Property Appraiser's records (Monroe County Growth Management Division, 1991). This data provides parcel and floor area for land uses which have been grouped into Property Classification (PC) Codes. These PC Codes have been grouped to correspond with the existing land use categories illustrated on the Existing Land Use Map to indicate a general range of density and intensity of use for each of the existing land use categories (Table 2.2). For several land use categories, such as General Commercial, Tourist Commercial, and Industrial, the Property Appraiser's data reflects a reasonably accurate portrayal of general densities and intensities of use as well as consistency with the acreage's determined from the Existing Land Use Map. However, there are a number of discrepancies with the data that should be rectified:

- (a) the PC Codes may not necessarily reflect the land use of a parcel as mapped on the Existing Land Use Map. For example, the PC Code 81 Military indicates there are 1,824 acres of Military lands, while the mapped Military land use category indicates there are 3,289 acres of Military lands in the County;
- (b) the densities and intensities of use shown in Table 2.2 do not represent a true (maximum and minimum) range of densities and intensities, but instead represent average densities and intensities for each PC Code;
- (c) the Property Appraiser's data does not appear to be consistently accurate throughout the range of PC Codes. For example, the PC Code 4 Condominium indicates there are only 12 Condominium units on 74 acres in the entire County, which is not accurate, and the PC Code 81 Military indicates there is only 22,119 SF of buildings on 1,824 acres of Military lands, which is also not accurate.

The Monroe County Growth Management Division should coordinate with the Property Appraiser's Office to continually update the existing database regarding land uses and densities and intensities of use in the County. The database should be updated to reflect the amount of development there is in the County as well as land uses categories as mapped on the Existing Land Use Map.

A. Residential Lands

Residential land uses, including single-family detached homes, mobile homes, multi-family apartments, and mixed-use residential areas are found on almost every one of the 38 Keys along US Highway 1. As indicated in Table 2.1, residential uses account for 10,790 acres, or 17.6 percent of the total area of the Keys. Single-family detached homes are the predominant residential type in the Keys, and account for approximately 8,379 acres, or 78 percent of the residential land use category. Mobile homes occupy the second largest residential land area, and include 1,063 acres. Multi-family residential development, including apartments, condominiums and cooperatives, account for 638 acres, or 6 percent of the developed residential land area. Mixed residential areas include approximately 711 acres, representing approximately 7 percent of the residential land use category.

B. Commercial Lands

Commercial land uses can broadly be defined as those uses associated with the buying and selling of goods and/or services. Commercial uses account for 2,270 acres, or 3.7 percent of the land area for the Keys portion of unincorporated Monroe County (Table 2.1). Commercial land uses include general commercial, commercial fishing, and tourist commercial land uses. General commercial uses include retail and office uses which are oriented toward the resident population and represent the majority of commercial uses. General commercial uses are generally concentrated in a strip along US 1. This is primarily evident in the more heavily developed Keys, including Key Largo, Marathon and Upper Matecumbe, and consists of retail, service, and auto-related uses as well as office buildings, which are generally small, single story structures. The General Commercial land use category includes approximately 994 acres, representing 43 percent of the commercial uses. Commercial fishing uses include land uses which are oriented toward the commercial fishing industry including commercial marinas and landing areas, processing plants, boat repair and maintenance, and equipment and trap storage areas. Commercial Fishing uses in unincorporated Monroe County are heavily concentrated in the Lower Keys, with approximately 152 acres, or 62 percent, of the total Commercial Fishing uses in the Lower Keys. Tourist Commercial uses include land uses which are oriented to tourists and visitors, including hotels/motels, private parks and recreation areas, and private campgrounds and recreational vehicle (RV) parks. Tourist commercial uses account for 1,029 acres, representing approximately 45 percent of the total commercial land use category, and are more heavily concentrated in the Upper and Middle Keys than the Lower Keys.

C. Industrial Lands

Industrial land uses account for approximately 515 acres in the unincorporated portion of the Keys. This accounts for less than one percent of the total land area. Industrial uses include cement, rock and gravel operations, light manufacturing and storage areas, and heavy industrial uses. Industrial uses are heavily concentrated in the Lower Keys, with 378 acres, or 73 percent, of the total Industrial land uses located in the Lower Keys.

D. Agricultural/Maricultural Lands

Although agricultural activities have historically been undertaken in the Keys, this is no longer the case. However, several mariculture operations have been established and account for approximately 42 acres. These maricultural operations are located in the Middle Keys.

E. Institutional Lands

Institutional uses, including hospitals, churches, cemeteries, and service clubs account for 116 acres in the County, representing less than one percent of the total land area.

F. Educational Lands

Educational land uses account for approximately 106 acres in Monroe County. This includes private schools as well as the seven public schools operated by the Monroe County School Board (two high schools, one middle school, two middle/elementary schools and two elementary schools) within the unincorporated portion of the County.

G. Public Buildings/Grounds

Public Buildings/Grounds account for approximately 61 acres in Monroe County, representing less than one percent of the total area of the County. This land use category includes all government offices, such as county, state and federal offices, post offices, sheriff and jail facilities, Coast Guard stations, fire stations, cemeteries/crematories and community clubs and lodges. This land use category does not include publicly-owned lands held for conservation purposes (see L. Conservation Lands below).

H. Public Facilities

Public facilities account for approximately 539 acres in Monroe County, representing approximately one percent of the total land area. This land use category includes land owned by public utilities and service providers.

I. Military Lands

The Florida Keys have long been recognized as strategically significant by the US military forces, and military operations still play an important role in the economy of the Keys. As shown in Table 2.1, military lands account for 3,300 acres in the Keys, or approximately five percent of the total land area. Military lands are located entirely in the Lower Keys, including the Boca Chica Naval Air Station on Boca Chica, Rockland and Geiger Keys, and additional facilities on Saddlebunch Key and Cudjoe Key (the "Blimp Base").

J. Historic Lands

Historical lands as shown on Table 2.1 include only 0.5 acres, which is the Bat Tower site located on Lower Sugarloaf Key. Although there are other historic sites and districts in unincorporated Monroe County, these are located within Conservation or Recreation land use categories or are located on offshore islands (i.e., Indian Key, Pigeon Key, and Fort Jefferson National Monument). See Section 2.1.6 for a full discussion of historic resources.

K. Recreation Lands

Recreation lands include both public recreation lands and facilities as well as some private recreation lands, such as golf courses. These uses account for approximately 1,791 acres, or 3 percent of the total land area. Two of the larger recreation areas in this category are Bahia Honda and Long Key State Recreation Areas.

L. Conservation Lands

Conservation lands includes lands which have been acquired by public agencies and private organizations for conservation purposes. This is the single largest land use category after vacant

Table 2.2
Existing Land Use and Densities
Generated from Property Appraiser's Data

PC	Description	Area (SF)	Area (Acres)	Units	Building SF	Density (DU/Acres)	FAR (SF/SF)
Single-Family							
1	Single-Family	181,220,044	4,160.2	14,928	NA	3.6	NA
Mobile Homes							
2	Mobile Homes	28,432,159	652.7	6,144	NA	9.4	NA
Multi-Family							
3	Multi-Family (10 units or more)	207,142	4.8	44	NA	9.3	NA
4	Condominium	3,222,469	74.0	12	NA	0.2	NA
5	Cooperatives	131,215	3.0	0	NA	0.0	NA
8	Multi-Family (< 10 units)	15,459,046	354.9	2,449	NA	6.9	NA
	Subtotal	19,019,872	436.6	2,505	NA	5.7	NA
Mixed Residential							
		NA	NA	NA	NA	NA	NA
General Commercial							
11	Stores One Story	6,297,297	144.6	NA	1,236,975	NA	0.1964
12	Store/Off/Res Gr Combination	7,096,705	162.9	NA	657,248	NA	0.0926
13	Department Stores	137,611	3.2	NA	42,960	NA	0.3122
14	Supermarkets	200,147	4.6	NA	50,650	NA	0.2531
16	Community Shopping Centers	5,730,681	131.6	NA	825,190	NA	0.1440
17	Office Buildings 1 Story	3,521,687	80.8	NA	506,508	NA	0.1438
18	Office Buildings Multi-Story	600,377	13.8	NA	137,528	NA	0.2291
19	Professional Services Bldgs	479,984	11.0	NA	105,288	NA	0.2194
20	Airports	3,856,733	88.5	NA	27,265	NA	0.0071
21	Restaurants & Cafeterias	2,885,885	66.3	NA	454,754	NA	0.1576
22	Drive-In Restaurants	502,147	11.5	NA	49,404	NA	0.0984
23	Financial Institutions	1,108,911	25.5	NA	146,409	NA	0.1320
25	Repair Service Shop	1,913,789	43.9	NA	177,294	NA	0.0926
26	Service Stations	817,028	18.8	NA	103,406	NA	0.1266
27	Auto Sales/Repair	11,813,815	271.2	NA	761,634	NA	0.0645
28	Parking Lots	228,716	5.3	NA	0	NA	0.0000
29	Wholesale Outlet	1,063,129	24.4	NA	46,289	NA	0.0435
30	Florist/Greenhouses	603,710	13.9	NA	4,135	NA	0.0068
31	Drive-in Theaters/Open Stadium	535,011	12.3	NA	5,373	NA	0.0100
33	Nightclubs, Lounges, Bars	547,306	12.6	NA	90,412	NA	0.1652
34	Bowling Alleys	210,587	4.8	NA	46,289	NA	0.2198
69	Leather Goods	72,745	1.7	NA	0	NA	0.0000
	Subtotal	50,151,256	1,153.0	NA	5,475,011	NA	0.1092
Commercial Fishing							
44	Packing Plants/Seafood/Fruit	2,989,710	68.6	NA	120,566	NA	0.0403
Tourist Commercial							
35	Tourist Attractions	1,129,048	25.9	NA	39,109	NA	0.0346
36	Camps, Priv./Docks/Recreat/Parks	22,096,180	507.3	NA	400,863	NA	0.0181
37	Race Tracks/Horse, Auto, Dog	304,920	7.0	NA	36,701	NA	0.1204
39	Hotels/Motels	20,176,719	463.2	NA	2,824,508	NA	0.1400
	Subtotal	43,706,867	1,003.4	NA	3,301,181	NA	0.0755

Table 2.2 (cont.)
Existing Land Use and Densities
Generated from Property Appraiser's Data

PC	Description	Area (SF)	Area (Acres)	Units	Building SF	Density (DU/Acres)	FAR (SF/SF)
Industrial							
41	Light Manufacturing	260,629	6.0	NA	27,760	NA	0.1065
42	Heavy Industrial	390,199	9.0	NA	21,723	NA	0.0557
43	Lumber Yds/Sawmill	230,915	5.3	NA	22,431	NA	0.0971
46	Other Food Processing	804,092	18.5	NA	38,113	NA	0.0474
47	Plants/Cement/Rock/Gravel	10,655,647	244.6	NA	36,400	NA	0.0034
48	Warehousing	3,954,631	90.8	NA	729,641	NA	0.1845
49	Open Storage	3,697,895	84.9	NA	17,386	NA	0.0047
	Subtotal	19,994,008	459.0	NA	893,454	NA	0.0447
Agricultural/Maricultural							
68	Dairies/Feed Lots	203,425	4.7	NA	0	NA	0.0000
Education							
72	Schools/Colleges/Priv	3,607,206	82.8	NA	38,358	NA	0.0106
83	School/Public/Bd of Public Ins	6,208,647	142.5	NA	425,381	NA	0.0685
	Subtotal	9,815,853	225.3	NA	463,739	NA	0.0472
Institutional							
71	Churches	4,716,818	108.3	NA	330,456	NA	0.0701
73	Hospital (private)	641,877	14.7	NA	133,150	NA	0.2074
74	Homes for the Aged	196,020	4.5	NA	66,078	NA	0.3371
76	Mortuaries/Cemeteries	1,491,134	34.2	NA	10,435	NA	0.0070
77	Clubs/Lodges	8,629,218	198.1	NA	267,434	NA	0.0310
85	Hospitals	155,047	3.6	NA	32,442	NA	0.2092
	Subtotal	992,944	22.8	NA	839,995	NA	0.8460
Public Buildings/Grounds							
86	Other Counties	42,677,467	979.7	NA	363,254	NA	0.0085
87	Other State	239,042,804	5,487.7	NA	67,744	NA	0.0003
89	Other Municipal	4,064,886	93.3	NA	40,746	NA	0.0100
94	Right-of-Way	22,696,659	521.0	NA	3,734	NA	0.0002
	Subtotal	308,481,816	7,081.8	NA	475,478	NA	0.0015
Public Facilities							
91	Utilities/Water Tanks	4,378,944	100.5	NA	186,982	NA	0.0427
Military							
81	Military	79,450,902	1,823.9	NA	22,119	NA	0.0003
Historic							
NA	NA	NA	NA	NA	NA	NA	NA
Recreation							
38	Golf Courses	12,126,642	278.4	NA	59,058	NA	0.0049
80	Fl. Parks & Memorial	1,332,500	30.6	NA	0	NA	0.0000
92	Parks/Private	967,825	22.2	NA	257	NA	0.0003
	Subtotal	14,426,967	331.2	NA	59,315	NA	0.0041
Conservation							
NA	NA	NA	NA	NA	NA	NA	NA

Table 2.2 (cont.)
Existing Land Use and Densities
Generated from Property Appraiser's Data

PC	Description	Area (SF)	Area (Acres)	Units	Building SF	Density (DU/Acres)	FAR (SF/SF)
Vacant							
0	Residential	1,774,167,150	40,729.3	NA	NA	NA	NA
10	Commercial	92,784,524	2,130.0	NA	NA	NA	NA
40	Industrial	134,600	3.1	NA	NA	NA	NA
70	Institutional	14,149,710	324.8	NA	NA	NA	NA
	Subtotal	1,881,235,984	43,187.2	NA	NA	NA	NA
Not Classifiable							
96	Waste Lands	435,600	10.0	NA	0	NA	0.0000
99	Non Ag Acreage 5 Ac or More	21,687,698	497.9	NA	11,707	NA	0.0005
	Subtotal	22,123,298	507.9	NA	11,707	NA	0.0005
Total Unin. Monroe County		2,666,624,049	NA	NA	NA	NA	NA
Mainland/Submerged							
82	US Mainland	195,934,488	4,498.0	NA	53,049	NA	0.0003
88	Other Federal	2,532,938,628	58,148.3	NA	246,498	NA	0.0001
95	Submerged Lands	129,376,900	2,970.1	NA	7,331	NA	0.0001

NA Not Available

Source: Monroe County Property Appraiser's Office, 1991.
Monroe County Growth Management Division, 1991.

lands, and accounts for approximately 20,696 acres, or 34 percent of the total land area of the Keys. These conservation lands are primarily located in the Upper and Lower Keys and indicate that the federal and state governments have been actively acquiring environmentally sensitive lands and habitats of rare, threatened and endangered species. This category includes such conservation lands as Crocodile Lake National Wildlife Refuge, the National Key Deer Refuge, and the John Pennekamp Coral Reef State Park.

M. Vacant Lands

This category is the largest land use classification in the Keys. The vacant land area is approximately 21,127 acres, or 34 percent of the total area of the unincorporated portion of the Keys. Vacant lands are heavily concentrated in the Lower Keys, as approximately 44 percent of the Lower Keys are classified as vacant.

2.1.2 Platted Lots and Subdivisions

An important component of the land use analysis for Monroe County is the number of platted lots and platted subdivisions. In October 1991, the Monroe County Growth Management Division prepared an inventory of subdivisions throughout the Keys that included lots that are currently zoned in one of three categories that assign development potential on a parcel, rather than acreage basis. For these three zoning categories, density is presently assigned at one unit per lot, regardless of the lot size. It should be noted that all subdivisions are not exclusively zoned for one of these three categories. In other words, a single subdivision may include areas with one unit per lot zoning and areas where the development potential is assigned on an acreage or density basis.

The three zoning categories that provide for one unit per lot include Improved Subdivision (IS), Urban Residential Mobile Home (URM), and Commercial Fishing Village (CFV). It should also be noted that parcels with one of these zoning designations do not always fall within a platted subdivision. However, the inventory prepared in September 1991 does list all IS, URM and CFV lots, including those outside platted subdivisions.

The primary reason for establishing this inventory of platted lots was to determine the potential magnitude of single-family residential development expectations. While not all development occurs on platted lots in platted subdivisions, the majority of single-family home development does occur in areas zoned for one of the three one unit/parcel zoning districts. It can be expected that this trend will continue, as by definition, these IS, URM and CFV parcels occur in areas of existing infrastructure (potable water and roads), and are generally located in disturbed areas.

There are a total of 37,128 lots zoned IS, URM and CFV in unincorporated Monroe County (Table 2.3). Approximately 15,129, or 41 percent, of these lots are located in the Upper Keys; approximately 6,820, or 18 percent, of these lots are located in the Middle Keys; and approximately 15,179, or 41 percent, of these lots are located in the Lower Keys.

As indicated in Table 2.3, approximately 21,394, or 58 percent, of the total IS, URM and CFV lots are already developed; 375, or approximately one percent, are owned for conservation purposes; and the remaining 15,359 lots, or 41 percent, are vacant. However, approximately 436 of these vacant lots are not considered to be developable due to substandard size, inundation, or the presence of mangroves,

Table 2.3

Inventory of IS, URM and CFV Lots (1)

	Upper Keys	Middle Keys	Lower Keys	Total
Vacant Unbuildable (2)	91	102	243	436
Vacant Buildable	5,823	2,345	6,755	14,923
<i>Percent Vacant Buildable</i>	38.5%	34.4%	44.5%	40.2%
Subtotal - Vacant	5,914	2,447	6,998	15,359
<i>Percent Vacant</i>	39.1%	35.9%	46.1%	41.4%
Conservation (3)	107	0	268	375
<i>Percent Conservation</i>	0.7%	0.0%	1.8%	1.0%
Developed (4)	9,108	4,373	7,913	21,394
<i>Percent Developed</i>	60.2%	64.1%	52.1%	57.6%
Total Lots	15,129	6,820	15,179	37,128

(1) Number of lots zoned IS, URM and CFV as determined in the Inventory of Subdivisions prepared by the Monroe County Growth Management Division, October 8, 1991.

(2) Number of lots that are likely to be unbuildable, due to substandard size, inundation, or the presence of mangroves, freshwater wetlands, and undisturbed saltmarsh and buttonwood wetlands.

(3) The number of undeveloped IS, URM and CFV lots purchased for conservation purposes by the state or federal government, or by private organizations.

(4) Number of IS, URM and CFV lots developed with a house, a part of a house, or a permanent structure.

Source: Monroe County Growth Management Division, October 1991.
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freshwater wetlands, and undisturbed saltmarsh and buttonwood wetlands. Therefore, approximately 14,923, or 40 percent, of the total IS, URM and CFV vacant lots are considered to be developable. Detailed upland and disturbed wetland vegetation information for these vacant lots is not currently available.

The distribution of these vacant buildable IS, URM and CFV lots through the Keys varies. The Upper Keys, with 5,823 lots, account for 39 percent of the lots. The Middle Keys, with 2,345 lots, account for 16 percent of the total; and the Lower Keys, with 6,755 lots, account for 45 percent of the total available lots. The greatest localized concentration of platted lots is on Key Largo, with 4,178 lots, or 28 percent of the County total. Big Pine Key, with 2,919 lots, accounts for 20 percent of the total (more than all of the Middle Keys combined), and Marathon, with 933 lots, accounts for six percent of the total. As would be expected, these three areas include the greatest concentration of lots for each of their respective subareas, with Key Largo accounting for 72 percent of all of the lots in the Upper Keys. Marathon accommodates 40 percent of the lots in the Middle Keys, and Big Pine Key accounts for 43 percent of the lots in the Lower Keys.

To assist in the analysis of the existing land use pattern, the location of each of the existing IS, URM and CFV subdivisions and the percentage of development within each subdivision has been mapped on the Platted Lands Map Series (see Map Atlas). As previously stated, a single subdivision may include areas with one unit per lot zoning (i.e., IS, URM and CFV lots), as well as areas where the development potential is assigned on an acreage or density basis. It should be noted that the percentage developed for each subdivision indicated on the Platted Lands Map Series refers only to the IS, URM and/or CFV portions of the subdivisions.

In considering the implications of this magnitude of platted lots, it should be noted that even though the theoretical capacity of the 14,923 vacant buildable lots may be 14,923 single-family homes, the actual development potential among these platted lots over the planning horizon of this Comprehensive Plan may be substantially less due to the following factors:

- (a) Voluntary Density Reductions: Even though present regulations permit one unit per lot, many property owners choose to build on aggregations of two or more lots, thus voluntarily reducing both the density and the inventory of buildable lots;
- (b) Concurrency: Even though past or present regulations may be interpreted to have granted certain rights pertaining to density, platted lots are considered to be subject to concurrency requirements;
- (c) Absorption Trends: Based on past permitting trends averaging 552 units per year, the 14,923 vacant, buildable platted lots represents a 27-year supply. Further, it has been estimated by the Monroe County Growth Management Division that only an average of 65 percent of single-family building permits result in completed units. Therefore, the actual annual completion rate of single family units is approximately an average of 359 units per year. On this basis, the 14,923 vacant, buildable platted lots represents a 42-year supply at past growth rates.

The present supply of platted lots is much greater than past trends indicate would be necessary to accommodate the population over the planning horizon of this Comprehensive Plan. In other words, market demands are not likely to result in the "build out" of the inventory of platted lots in the foreseeable future, even without any further regulatory constraint.

2.1.3 Offshore Islands

In addition to the 38 islands connected by US 1, Monroe County also contains over 200 offshore islands which are not connected to US 1 or other roads by bridges. For the most part, these islands are composed of sediment, as opposed to rock, and are periodically inundated (Enos, 1989). These islands are largely undeveloped due to the large number in public ownership as well as their relative inaccessibility, their natural resource characteristics, including extensive amounts of mangroves and wetlands, and federal, state and local regulations which have combined to limit development to extremely low levels.

Principal habitats of these offshore islands are:

- (a) red and black mangrove swamps;
- (b) algal and halophyte marshes;
- (c) grass "prairies"; and
- (d) hardwood-buttonwood hammocks (Enos, 1989).

Offshore islands are highly dynamic as they are formed by a combination of erosion and accretion of sediments and initial mangrove colonization (Enos, 1989). The above listing of habitat types represents a general sequence of habitat development, and this sequential development can generally be correlated with the size of the island. Smaller islands tend to consist entirely of mangrove swamp, whereas the larger islands tend to contain open areas and may support freshwater forests or hammocks (Enos, 1989).

These islands provide the only nesting and resting sites for birds, the unique habitat for terrestrial animals and reptiles, and the only source of food and freshwater for non-aquatic inhabitants and transients (Enos, 1989). Many of the islands have been documented as habitat for threatened and endangered species. Most of the offshore islands are surrounded by shallow water, and the submerged lands support seagrass beds which are important in stabilizing sediments that would otherwise exist as shifting sand and mud.

Although the offshore islands are largely undeveloped, as the popularity of Monroe County has increased for such water-related recreational activities as boating and jetskiing, the pressures on and damage to the offshore islands has increased. Potential adverse impacts associated with human activities include the scouring of seagrass beds due to boating and jetski activities in shallow water; the disturbance of migratory and wading waterfowl and turtle habitat and nesting sites; and destruction of habitat and disposal of garbage by visitors to these islands.

A. Inventory of Offshore Islands

Publicly-Owned Offshore Islands

Most of the offshore islands in Monroe County are in public ownership for conservation purposes (Table 2.4). In the Upper and Middle Keys, all of the offshore islands in Florida Bay to the north of the Intracoastal Waterway between Cross Key on the east and approximately Long Key on the west are within Everglades National Park (these are shown with dashed coastlines on the Existing Land Use Map series). In addition to those islands within Everglades National Park, several offshore islands in the Upper and Middle Keys are part of publicly-owned conservation lands, including the Crocodile Lake National Wildlife Refuge, the John Pennekamp Coral Reef State Park, the Key Largo Hammock, Lignumvitae Key and Shell Key State Botanical Sites, the Indian Key State Historic Site, and Long Key State Recreation Area. In the Lower Keys, the majority of offshore islands in Florida Bay are in public ownership as part of the Great White Heron National Wildlife Refuge and the National Key Deer Refuge. To the west of Key West, the Key West National Wildlife Refuge includes a series of approximately 17 offshore islands, including the grouping of islands known as the Marquesas (the only offshore island in this grouping not in public ownership is Ballast Key). Further to the west of the Marquesas, the Fort Jefferson National Monument includes approximately 62,000 acres of submerged lands and 40 acres of uplands, including those islands commonly known as the Dry Tortugas.

All of these publicly-owned offshore islands are managed for conservation purposes by the U.S. Fish and Wildlife Service (FWS), the National Park Service and the Florida Department of Natural Resources (DNR). These offshore islands serve as habitat for a variety of wildlife, including many threatened and endangered species.

Privately-Owned Offshore Islands

There are approximately 60 offshore islands in private ownership and subject to regulation by Monroe County (Table 2.5). These include islands ranging in size from 1 acre to over several hundred acres (although there are some offshore islands of less than one acre, these are largely unnamed sovereignty lands owned by the State of Florida and are not listed on Tables 2.4, 2.5 or 2.6).

Many privately-owned offshore islands are "mangrove islands" which are periodically inundated and characterized by mangroves with very little upland vegetation. Wetlands mapping for most offshore islands is underway as part of the Advance Identification of Wetlands Program (ADID) (see Conservation and Coastal Management Element Section 3.9). Mapping of upland vegetation on most offshore islands is also underway by the County, utilizing digital information made available through the ADID Program (see Conservation and Coastal Management Chapter Section 3.11). The County's Geographic Information System will be used to store and plot wetland and vegetation data. Maps are expected to be complete by September 30, 1993.

As indicated in Table 2.5, only a few offshore islands currently have residential development. These include several of the offshore islands in North Key Largo near the Dade County border, including Palo Alto Key, Angelfish Key, Broad Key, and Black Swan Key. Cook's Island in the Newfound Harbor Keys is developed and also has docking facilities. Most of these homes are self-contained in terms of sewerage, water, electricity and communications.

A number of privately-owned offshore islands are included in the Coastal Barrier Resources System (CBRS) as established by the Coastal Barrier Resources Act (CBRA) of 1982. This legislation was

Table 2.4
Publicly-Owned Offshore Islands

Key Name	Map		Comments
	No. (1)	Acres (2)	
Great White Heron National Wildlife and National Key Deer Refuges (3)			
Annette Key	6	382.3	Portion not in public ownership.
Anonimo Key	8	NA	
Barracuda Keys	7	NA	
Bay Keys	8	NA	
Big Harper Key	8	NA	
Big Spanish Key	7	57.0	Portion not in public ownership.
Budd Keys	7	42.3	
Buttonwood Keys	7	73.8	
Cayo Agua Key	8	51.0	
Channel Key	8	25.3	
Cocoanut Key	6	NA	Portion not in public ownership.
Content Keys	7	339.8	
Coon Key	8	NA	
Crane Key	7	NA	
Crane Keys	8	NA	
Crawl Key	6	19.8	Also known as Eagle Nest Key.
Cutoe Key	7	NA	
Duck Key	8	NA	
East Bahia Honda Key	6	NA	
Fish Hawk Key	8	16.0	
Friend Key	6	NA	
Galdin Key	7	NA	
Grassy Keys	8	NA	
Happy Jack Key	7	NA	
Hardup Key	6	NA	
Harper Key	8	NA	
Horseshoe Keys	6	NA	
Howe Key Mangrove	7	NA	
Howe Key	7	721.7	
Hurricane Key	7	NA	
Johnson Keys	6	256.9	Portion not in public ownership.
Johnstons Keys	7	485.0	
Johnston Key Mangroves	7	NA	
Knockemdown Keys	7	1134.1	
Little Pine Key	6	564.5	
Little Pine Key Mangroves	6	NA	Also known as East Harbor Keys.
Little Spanish Key	6	52.0	
Little Spanish Key Mangrove	6	NA	
Little Swash Keys	7	NA	
Lower Harbor Keys	8	NA	
Mayo Key	7	58.3	Portion not in public ownership.
Mud Keys	8	138.5	
Old Dan Mangrove	8	NA	
Pidgeon Key	7	NA	
Porpoise Key	7	NA	
Pumpkin Key	7	NA	
Pye Key	7	NA	
Rattlesnake Lumps	7	NA	
Refuge Key	5	NA	
Round Key	8	NA	
Sandfly Key	6	NA	
Sawyer Key	7	90.8	
Snipe Keys	7	720.3	
Squirrel Key	7	NA	
Teakettle Key	6	NA	
Toptree Hammock Key	7	NA	West of Rattlesnake Lumps.
Torch Key Mangroves	7	NA	
Unnamed	7	NA	
Unnamed	7	NA	
Unnamed	6	NA	
Unnamed	8	NA	West of Saddlebunch Keys (Dreguez Key).
Unnamed	6	NA	

Table 2.4
Publicly-Owned Offshore Islands

Key Name	Map No. (1)	Acres (2)	Comments
Upper Harbor Key	7	NA	
Waltz Key	8	NA	
Water Key	6	163.8	
Water Key Mangrove	6	2.0	
Water Keys	7	NA	
West Bahia Honda Key	6	27.0	
Whiting Key	8	NA	
Key West National Wildlife Refuge			
Archer Key	(4)	NA	
Barracuda Keys	(4)	NA	
Big Mullet Key	(4)	NA	
Boca Grande Key	(4)	NA	
Cottrell Key	(4)	NA	
Crawfish Key	(4)	NA	
Eastern Dry Rocks	(4)	NA	
Gull Keys	(4)	NA	
Joe Ingram Key	(4)	NA	
Little Mullet Key	(4)	NA	
Man Key	(4)	NA	
Marquesas Keys	(4)	NA	
Mooney Harbor Key	(4)	NA	
Mule Key	(4)	NA	
Rock Key	(4)	NA	
Sand Key	(4)	NA	
Woman Key	(4)	NA	
Crocodile Lake National Wildlife Refuge			
Linderman Key	1	NA	Portion not in public ownership.
Unnamed	1	NA	South of Linderman Key.
Fort Jefferson National Monument			
Loggerhead Key	(4)	NA	
Garden Key	(4)	NA	
Bush Key	(4)	NA	
Long Key	(4)	NA	
Hospital Key	(4)	NA	
East Key	(4)	NA	
State Parks, Recreation Areas, and Botanical and Historic Sites			
Angelfish Keys	1	256.5	Portion not in public ownership, Key Largo Hammock State Botanical Site.
Cowpens Rookery	3	NA	Leased to and managed by the National Audobon Society.
El Radabob Key	2	NA	John Pennekamp Coral Reef State Park.
Indian Key	4	183.6	Indian Key State Historical Site.
Lignumvitae Key	4	327.5	Lignumvitae Key State Botanical Site.
Little Fat Deer Key	5	14.9	Also known as Deer Key, Long Key State Recreation Area.
Palo Alto Key	1	NA	Portion not in public ownership, Key Largo Hammock State Botanical Site.
Rachel Key	5	NA	Owned by the Florida Keys Land and Sea Trust.
Rattlesnake Key	2	NA	John Pennekamp Coral Reef State Park.
Shell Key	3	220.5	Shell Key State Botanical Site.

(1) Refers to the map number of the Existing Land Use Map series on which the island appears.

(2) Acreage provided by the Monroe County Property Appraiser's Office.

(3) Includes offshore islands owned and managed by the U.S. Fish and Wildlife Service.

May include some sovereignty lands owned by the State of Florida but managed by the FWS as part of the Great White Heron National Wildlife or National Key Deer Refuges.

(4) Not shown on the Existing Land Use Map series.

NA Not available.

Table 2.5

Privately-Owned Offshore Islands

Key Name	Map No. (1)	Acres	CBRS (2)	FCAA Hook-Up (3)	Proposed for Acquisition (4)	Comments
Angelfish Keys	1	60.0 (7)	✓		✓	Portion of Angelfish Keys in CBRS.
Anne Key	(5)	28.8 (6)	✓		✓	Palo Alto group, Map 1, developed.
Ballast Key	(5)	24.0 (6)				
Bamboo Key	5	9.0 (6)				
Bay Keys	8	35.0 (7)			✓	
Big Raccoon	6	202.3 (6)				Also known as Raccoon Key.
Bird Key	8	14.5 (6)	✓			
Black Swan	(5)	4.8 (6)	✓		✓	Palo Alto group, Map 1, developed.
Broad Key	1	63.0 (6)	✓		✓	Portion of Broad Key is in CBRS.
Budd Keys	7	25.0 (6)	✓	✓		Developed.
Burnt Keys	7	134.3 (6)				
Channel Key	5	11.5 (6)	✓			
Content Keys	7	50.0 (6)				
Cook's Island	6	40.6 (6)	✓	✓		Developed.
Cotton Key	3	36.4 (6)				
Crab Key	7	12.5 (6)	✓			
Don Quixote Key	6	20.4 (6)				
Dove Key	3	4.5 (6)	✓		✓	
East Sister Rock	5	1.0 (7)				Developed.
Fanny Keys	5	2.2 (6)				Developed.
Gopher Key	7	2.3 (6)	✓			
Half Moon Key	8	81.2 (6)	✓			
Howell Key	7	8.5 (6)				Also known as Drummond Key.
Key Who	7	10.0 (6)				West of northern tip of Summerland Key.
Knockemdown Keys	7	500.0 (7)	✓	✓	✓	(8)
Little Card Point	1	122.1 (6)	✓			
Little Duck Key	8	25.5 (6)				
Little Grassy Key	(5)	73.8 (6)				Near Big Pine Key.
Little Raccoon Key	6	64.1 (6)				
Linderman Key	1	10.0 (7)	✓		✓	
Loggerhead Key	7	87.0 (6)	✓			Also known as Key Lois.
Main Key	1	145.6 (6)				
Mallory Keys	8	20.0 (6)				
Marvins Keys	8	40.5 (6)			✓	
Molassas Keys	6	4.6 (6)				
Money Key	7	5.2 (6)	✓			Developed.
Mud Keys	8	10.0 (7)			✓	
Newfound Harbor Keys	6	118.6 (6)	✓	✓		Developed.
O'Hara Key	8	38.0 (6)	✓			
Palo Alto Key	1	373.9 (6)	✓		✓	Developed.
Pelican Key	8	20.0 (6)	✓			
Pumpkin Key	1	10.0 (6)	✓			

Table 2.5

Privately-Owned Offshore Islands

Key Name	Map No. (1)	Acres	CBRS (2)	FKAA Hook-Up (3)	Proposed for Acquisition (4)	Comments
Russell Key	5	12.8 (6)				Developed.
Saddlehill Key	8	107.3 (6)	✓			
Seven Mangrove Islands	(5)	17.3 (6)			✓	Developed.
Tarpon Belly Keys	7	13.0 (6)				
Tavernier Key	3	20.8 (6)	✓			
Toms Harbor Keys	5	41.5 (6)	✓			
Unnamed	(5)	1.0 (6)				(9)
Unnamed	(5)	8.8 (6)				(9)
Unnamed	(5)	27.3 (6)				(9)
Unnamed	(5)	1.4 (6)				(9)
Wells Key	7	39.0 (6)	✓			
West Harbor Key	8	69.3 (6)			✓	
West Sister Rock	5	1.0 (7)	✓			
Wilson Key	3	15.4 (6)				
Wisteria Island	8	39.0 (6)				

(1) Refers to the map number of the Existing Land Use Map series on which the island appears.

(2) Included in the Coastal Barrier Resources System.

(3) Areas excluded from FKAA hook-ups.

(4) Proposed for acquisition by either the U.S. Fish and Wildlife Service or the Florida DNR for conservation purposes.

(5) Not shown or labelled on the Existing Land Use Map series.

(6) Acreage provided by the Monroe County Tax Appraiser's Office.

(7) Acreage estimated for the privately-owned portion for planning purposes only.

(8) Little Knockemdown Key is in CBRS, but not FKAA hook-up restriction area.

Knockemdown Key is almost entirely in public ownership. It is in CBRS and the FKAA hook-up restriction area.

Little Knockemdown is entirely privately-owned and is proposed for acquisition by the USFWS.

(9) These unnamed offshore islands are listed by the Monroe County Property Appraiser's Office as being in private ownership. Some of these may be sovereignty lands owned by the State of Florida.

Sources:

Monroe County Property Appraiser's Office, 1991.

U.S. Fish and Wildlife Service, 1991.

Florida Keys Aquaduct Authority, 1990.

Florida DNR, 1991.

federally subsidized development of undeveloped coastal barriers in order to minimize the loss of human life, reduce expenditures of federal revenue, and reduce damage to fish and wildlife habitat and other valuable natural resources of coastal barriers (U.S.D.I., 1988).

Several of these islands contain hardwood hammock vegetation, which supports numerous plant and animal species that have very limited distributions and are considered rare and endangered. These areas have been excluded from being provided with water connections or hookups by the Florida Keys Aqueduct Authority (FKAA, 1990). In addition, due to their natural resource and habitat value, 13 of these offshore islands are proposed to be acquired by either the FWS or the Florida DNR for conservation purposes.

Other Offshore Islands

In addition to those islands included on Tables 2.4 and 2.5, there are a number of offshore islands for which ownership is unclear (Table 2.6). These islands are not listed by the Monroe County Tax Appraiser's Office as being in private ownership, and they have not been explicitly identified by any state or federal agencies as being in public ownership. Based upon discussions with the FWS, the Florida DNR Bureau of Submerged Lands, and the Monroe County Property Appraiser's Office, most of these islands are likely to be sovereignty lands which lie below the mean high water line and are owned by the State of Florida. Included in this category are a number of unnamed islands throughout the Keys which are not listed on Tables 2.4, 2.5 and 2.6. Since these islands have not been claimed as being in public ownership, Monroe County shall not designate these islands as Conservation lands at this time and shall continue to regulate these islands as if they were in private ownership and potentially subject to development.

B. Management Issues

There are a number of management problems associated with offshore islands, especially those referred to as the "Back Country Islands," which are located in remote areas and are largely in public ownership. Most of these islands are managed by the FWS as part of the Great White Heron National Wildlife Refuge and the National Key Deer Refuge. The primary value of these islands are as habitat for turtles and wading and migratory birds. However, recreational use of these islands has increased in recent years, and many of these uses conflict with the natural resource value of these islands. Management problems associated with these relatively remote islands include propeller scouring of seagrass beds; disturbance of migratory and wading waterfowl habitat and nesting sites and of turtle nests; destruction of habitat; and disposal of garbage by visitors to these islands.

The FWS recently hosted a conflict resolution forum to identify conflicts between user groups such as charter boat operators and agencies and private entities concerned with natural resource and habitat protection. The FWS is expected to issue its findings in the near future regarding those uses which will no longer be permitted on islands managed by the FWS.

C. Current Monroe County Regulations

Due to the natural resource value of offshore islands, Monroe County currently limits development to one (1) dwelling unit per ten (10) acres. The parcel size used to calculate potential density is exclusive of mangroves. Therefore, all offshore islands which contain less than 10 acres of non-mangrove vegetation have only limited uses. In addition to the residential density permitted above, camping by

Table 2.6

Other Offshore Islands (1)

Key Name	Map		CBRS (4)	Comments
	No. (2)	Acres (3)		
Big Mangrove Key	6	25.0	✓	
Bill Finds Key	7	2.0		
Cormorant Rookeries	1	20.0	✓	
Little Crane Key	7	2.0		
Marjoe Key	7	1.0		
Pelican Key	2	2.0		
Pigeon Key	2	12.0		
Porpoise Key	7	15.0		
Refuge Key	6	8.0		
Riding Key	7	15.0		
Rodriguez Key	2	120.0	✓	

- (1) Ownership of these Offshore Islands is unclear. They have not been identified as being either federally- or state-owned islands and are not listed as being privately-owned by the Monroe County Tax Appraiser's Office. These may be sovereignty lands owned by the State of Florida. Unnamed offshore islands not listed on Table 2.4 are included in this category.
- (2) Refers to the map number of the Existing Land Use series on which the island appears.
- (3) Acreage estimated for planning purposes only.
- (4) Included in the Coastal Barrier Resources System.

the owner on a temporary basis is also permitted as of right while marinas and campgrounds (at a density of two sites per acre on parcels of at least five acres) are currently permitted as major conditional uses.

D. Public Facilities

Development on offshore islands is unique with regard to the provision of public facilities. Monroe County does not encourage the development of these islands and does not spend any public funds to extend public services or facilities (i.e., water, electricity, etc.) to offshore islands or to construct any infrastructure (i.e., roads, bridges) on offshore islands. Monroe County currently permits these activities for applicants who pay for these improvements and who receive the approvals and permits required by the appropriate federal, state, and local agencies. Most of the existing residential development on offshore islands is self-contained in terms of sewerage, water, electricity and communications. However, this development requires onshore services, therefore it is treated as equivalent to development on one of the 38 main Keys in terms of demand for public facilities and services and also for hurricane evacuation planning.

2.1.4 Adjacent Jurisdiction Land Use

The generalized land uses of counties and municipalities adjacent to Monroe County are indicated on the Existing Land Use Map series. Dade County and Collier County border the Mainland portion of Monroe County to the north and east. There are no adjacent municipalities located in either of these two counties. Monroe County includes three incorporated cities: Layton, Key Colony Beach and Key West. Layton and Key Colony Beach are located in the Middle Keys, with Layton located on Long Key and Key Colony Beach on Fat Deer Key near Marathon. Key West is located at the southwestern end of the Keys. Key West is the largest city in the County and is the County seat. The City comprises all of the island of Key West, the north half of Stock Island, as well as Sunset Key, a small island across from the Mallory Docks and Key West Harbor (south of Wisteria Island). Fleming and Dredgers Keys are part of unincorporated Monroe County and are owned by the US Navy.

A. Dade County

Dade County lies to the east of the mainland portion of Monroe County and includes the southern mainland coast to the north of the Keys. To the west of US 1, the portions of Dade County adjacent to Monroe County are located within the Everglades National Park. This park is managed by the National Park Service and ranges from vast sawgrass prairies to tropical hammocks and mangrove swamps. Development is limited to park-related facilities including visitor centers, hiking trails, and overlooks along Route 27 and tourist-oriented facilities at Flamingo.

The portion of Dade County to the east of US 1 along the southern mainland coast is designated as Environmental Protection Subarea F (Coastal Wetlands and Hammocks) by the 2000 and 2010 Comprehensive Development Master Plan for Metro-Dade County. These areas are low-lying, flood prone and characterized predominantly by coastal wetland communities. Land uses which could be considered for approval include low-coverage residential use at a density not to exceed one dwelling unit per five acres, water-dependent uses or necessary public, water related facilities (Metro-Dade County Planning Department, 1988). These land uses are generally consistent with the adjacent County areas on North Key Largo, which are indicated as Conservation areas on the Existing Land Use Map

series. Conservation areas indicate lands that have been acquired by federal, state, or local agencies or private entities for conservation purposes.

B. Collier County

Collier County lies to the north of the mainland portion of Monroe County. The portions of Collier County adjacent to Monroe County are designated as Conservation Lands by the Collier County Growth Management Plan and are located within either Everglades National Park or Big Cypress National Preserve. Big Cypress National Preserve occupies much of the eastern half of Collier County, and is primarily cypress swamp, with pine woodlands, prairies, and marshes. This is consistent with the Conservation designation given to the Monroe County portion of the mainland immediately adjacent to Collier County.

C. City of Key Colony Beach

The City of Key Colony Beach is a 285 acre incorporated city located on Fat Deer Key within Monroe County. According to the City of Key Colony Beach Draft 1990 Master Plan, approximately 138 acres, or 48 percent, of the city consists of residential uses; 11 acres, or 4 percent, of commercial and resort uses; 26 acres, or 9 percent, of recreational and other public uses; 47 acres, or 17 percent, of streets; 1 acre, or 0.4 percent, of conservation areas; and approximately 61.2 acres, or 21.5 percent, of the city are designated as vacant lands. According to the Draft 1990 Master Plan, almost all of this vacant land is platted for residential development. The generalized land use category of single-family residential for Key Colony Beach as shown on the Existing Land Use Map is consistent with the developed land areas in Monroe County immediately adjacent to the City of Key Colony Beach, with general commercial, tourist-oriented commercial and residential development along US 1. Coco Plum, an adjacent subdivision located in Marathon (unincorporated Monroe County) to the east of Key Colony Beach, consists of vacant land, residential, commercial fishing, and tourist-oriented uses.

D. City of Layton

The City of Layton is an 85 acre municipality located on Long Key. According to the City of Layton Proposed Comprehensive Plan, approximately 15.8 acres, or 19%, of the City consists of residential development; 10.6 acres, or 12 percent, of commercial development; and 2.5 acres, or 3 percent, of institutional uses. The remaining 56 acres, or 66 percent, of the City are designated as vacant. Of this vacant land, approximately 5.9 acres, or 7 percent of the city, are platted for residential development; 2.1 acres, or 2 percent of the City, are platted for commercial development; and 48 acres, or 57 percent of the City, are unplatted. This is generally consistent with the portion of Long Key within unincorporated Monroe County, much of which is within the Long Key State Park, which borders the western and southern edges of the City of Layton. The east side of unincorporated Monroe County adjacent to the City is vacant land.

E. City of Key West

The City of Key West is a 3,730 acre municipality located at the southwestern end of the Florida Keys chain connected by US 1. With a population of 24,832, the City has the greatest concentration of residents and tourists in the County, and accounts for over 31% of the County's 78,000 residents. According to the City of Key West Comprehensive Plan, approximately 652.8 acres, or 17.5 percent, of the city consists of residential development; 301 acres, or 8 percent, of commercial development;

1,622.7 acres, or 44 percent, of institutional (largely military) development; 431 acres, or 12 percent, of rights-of-way; and 548 acres, or 15 percent, of undeveloped lands. The Comprehensive Plan indicates a total area of 4,437.7 acres for the City, including some 225 acres of open water, and Fleming and Dredgers Keys, which are both unincorporated military lands owned by the US Navy.

The southern half of Stock Island, which is located in unincorporated Monroe County, is intensively developed with general commercial uses along US 1, and with a mix of residential, tourist-oriented commercial and commercial fishing uses south of the highway. Commercial fishing areas, City Electric and Florida Key Aqueduct Authority installations, and Cow Key, which is vacant, are located along the southern coastline. The north half of the island, which lies in the City of Key West, is less intensively developed than the southern half, and includes the Key West Golf and Country Club, and such institutional and public uses as the Florida Keys Memorial Hospital, the Florida Keys Community College, the County complex, and a landfill.

The land use of the City of Key West to the west of Stock Island includes residential and tourist-oriented uses as well as the Key West International Airport. Along the northern coast, land uses consist of general commercial, residential, and military uses.

2.1.5 Areas of Critical County Concern

Pursuant to the Monroe County Land Development Regulations (LDRs), the Monroe County Board of County Commissioners (BOCC) may designate areas within the County as Areas of Critical County Concern (ACCC) if it is determined that the area is one of special environmental sensitivity, contains important historical or archaeological resources, is characterized by substantial capital improvement deficiencies, or provides significant redevelopment opportunities (Monroe County BOCC, 1990). The BOCC has identified four ACCCs within Monroe County, including:

- (a) Big Pine Key ACCC;
- (b) North Key Largo ACCC;
- (c) Windley Key/Holiday Isles ACCC; and
- (d) Ohio Key ACCC.

Big Pine Key, North Key Largo, and Ohio Key have been designated as ACCCs due to environmental sensitivity, while Windley Key/Holiday Isle has been designated due to infrastructure deficiencies, primarily traffic and parking considerations. North Key Largo and Big Pine Key have been the subjects of environmentally-based future land use plans, while the plan for Windley Key has focused on alleviating the traffic and parking constraints existing on the Key. The reasons for the establishment of the ACCCs and associated planning issues are described below.

A. Big Pine Key ACCC

The Big Pine Key ACCC includes the central and northern portions of Big Pine Key. The ACCC was established to initiate a focal point planning effort directed at reconciling the conflict between

reasonable investment backed expectations of landowners and the habitat needs of the endangered Key deer (*Odocoileus virginianus clavium*). The focal point plan was to consider:

- (a) the reasonable investment backed expectations of the owners of land within the Big Pine Key ACCC;
- (b) the habitat needs of the Key deer;
- (c) the role and importance of freshwater wetlands to the survival of the Key deer;
- (d) the conflicts between human habitation and the survival of the Key deer;
- (e) management approaches to reconciling the conflict between development and the survival of the Key deer; and
- (f) specific implementation programs for the Big Pine Key ACCC.

A number of planning studies have been prepared to address the issues described above. However, none of these studies currently has standing as the adopted focal point plan for the Big Pine Key ACCC and currently development permits are issued for Big Pine Key according to the assigned zoning classifications (with lots assigned the "ACCC" designation having an assigned density of one dwelling unit per acre). Although these planning efforts have differed in their proposed mechanisms and implementation programs to reconcile conflicts on Big Pine Key, there is general agreement on issues (a) through (d), which are described below.

Development Potential and Capacity Constraints

Big Pine Key, at approximately 6,600 acres, is one of the largest land masses in the Keys and is home to approximately 4,208 permanent and 2,154 seasonal residents, for a total 1990 functional population of 6,362 (Price Waterhouse). It is also one of the fastest growing communities in Monroe County. From 1980 to 1988, Monroe County experienced a 13.5 percent increase in permanent population, while during that same time period Big Pine Key had a 43 percent population increase (Sedway Cooke Associates, 1991). Despite this recent increase in population and although the Key is largely subdivided, the Key still has a semi-rural character, which is attributable to a number of factors:

- (a) development is largely concentrated in existing subdivisions and the western and eastern coasts to the north of US 1;
- (b) development is spotty within existing subdivisions, as most subdivisions are less than one-third built out;
- (c) the FWS, the Florida DNR, and other public agencies and private conservation organizations have acquired large amounts of land from willing sellers, especially to the north of Watson Boulevard, for conservation purposes on Big Pine Key;
- (d) the presence of environmentally sensitive resources, including mangroves and freshwater wetlands, have limited development in these areas; and

- (e) the 750-acre Pine Key Acres, which is a partially developed subdivision of one acre lots in the central portion of the Key.

Although Big Pine Key is currently semi-rural in character, the Key has the potential to become much more urban and suburban in character as some of the existing 2,919 vacant buildable lots are developed. Population projections based on historic growth rates indicate that the functional population of Big Pine is expected to increase to 8,015 by 2000 and to 9,884 by 2010.

It is commonly recognized that the development of these 2,919 lots in their current configuration will result in the consumption and fragmentation of Key deer habitat to an extent that would seriously jeopardize the survival of the Key deer (Garrett and Robertson, 1989). However, the needs of the Key deer have not been expressed in terms of the maximum number and configuration of dwelling units which can be permitted on Big Pine Key, but in terms of the amount, variety and configuration of their habitat needs in addition to the need to reduce human/deer interaction, as described in the following sections.

Although sufficient environmental data is not currently available to determine a carrying capacity constraint based on Key deer survival, development on Big Pine Key is subject to concurrency requirements. Therefore, a concurrency constraint for the Key can be determined based on public facility and service constraints. Although traffic is not considered to be a critical constraint on growth **area-wide** throughout the Keys (see 2.1.9 below), traffic capacity limitation (failure to meet LOS C) is a critical **localized** growth constraint on the segment of US 1 on Big Pine Key (between MM 29.5 and 33). The capacity analysis presented in the Traffic Circulation Element indicates that Big Pine Key has virtually exhausted its residential development capacity as defined by present travel speed traffic constraints. The remaining capacity on Big Pine Key is approximately 17 dwelling units without either increases in capacity or other measures to improve travel speeds.

Habitat Needs of the Key Deer

Key deer are a highly mobile, highly territorial animal requiring a variety of habitats including mangrove, hardwood hammock, buttonwood and pineland communities and open developed areas, especially those that are routinely mowed (Garrett and Robertson, 1989). Although the Key deer is known to feed and travel through open disturbed and moderately developed areas, the home range of each deer must provide all of the essential components of native, undisturbed habitat types found on Big Pine Key for feeding, loafing, bedding, sexual behaviors, daily and seasonal movements, social interactions, and rearing of fawns (Garrett and Robertson, 1989).

Habitats with quality cover, such as those which occur on segments of Big Pine Key, have a higher carrying capacity than those adversely affected by land uses which have altered the native character of the land (Garrett and Robertson, 1989). All of the unfenced native plant communities on Big Pine Key and a majority of the developed lands containing native plants contribute to Key deer habitat. Areas altered by development are of less value as they tend to increase human/deer interactions and restrict mobility.

The following are generally recognized as the habitat needs of the Key deer:

- (a) Large Core Habitat Area: The Key deer require a large, contiguous core habitat area, and land acquisition has been identified as the single most important management strategy that would

significantly contribute to the successful maintenance of the Key deer in its natural environment (FWS, 1991). This has largely been accomplished by the FWS, which has acquired approximately 8,100 acres as part of the National Key Deer Refuge. The majority of this refuge land is located on Big Pine Key to the north of Watson Boulevard, although additional acreage has been acquired on No Name Key and other islands. In addition, the FWS has identified additional privately-owned land for acquisition.

In addition to the refuge area north of Watson Boulevard, the Florida DNR has initiated efforts to acquire approximately 1,200 acres on Big Pine Key to the south of US 1. Land acquired as part of the Coupon Bight/Key Deer CARL Project will serve as habitat for the Key deer and also buffer the Coupon Bight State Aquatic Preserve from the impacts of development (Florida DNR, 1991a).

- (b) Movement Corridors: The creation and maintenance of habitat corridors which provide routes for movement of deer north and south across US 1 on Big Pine Key are considered to be essential. There are several reasons for this, including minimizing further genetic isolation, preservation of existing Key deer home ranges which straddle US 1, protection of the animal's territorial nature and behavioral tendencies during rut, and its propensity to disperse (Garrett and Robertson, 1989). It should be noted that the Key deer are not expected to benefit from north-south corridors across US 1 until the causes of the large number of road kills are addressed (see Road Kill discussion below) (Garrett and Robertson, 1989).

The FWS has established Key Deer Movement Corridors based on the habitat needs of the Key deer which extend south from Watson Boulevard to beyond US 1. Land within these movement corridors is currently being acquired from willing sellers. In addition to the FWS, the South Florida Water Management District and private conservation organizations are acquiring properties from willing sellers within these movement corridors.

The Role and Importance of Freshwater Wetlands to the Survival of the Key Deer

The presence and distribution of year-round drinkable water on Big Pine Key is a critical component of Key deer habitat. Key deer cannot obtain sufficient water from vegetation and can only exist for a limited time without water. The availability of drinkable water during the dry season and in drought years is a limiting factor in much of the Key deer's range, and its absence limits the use of part or all of some keys. Although Key deer swim between islands and the Big Pine/No Name Key population migrates to various smaller, outlying islands to feed during the wet season when rainwater has collected, the population returns to the large islands which have a year-round supply of fresh water during the dry season.

Drinkable water for wildlife on Big Pine Key is dependent on a complex system in which freshwater lenses float on underlying saltwater. The lenses are affected by seasonal rainfall patterns, by monthly and seasonal tidal extremes which control the underlying saltwater, and surface activities such as pumping from wells and land scarification. Any land use which reduces the quality and/or quantity of the freshwater lens system of Big Pine Key would negatively impact Key deer. Special attention should be paid to limiting withdrawals and ensuring all septic systems are in compliance with the Florida Keys National Marine Sanctuary Water Protection Program.

Conflicts Between Human Habitation and the Survival of the Key Deer

The primary threats to the survival of the Key deer are related to human habitation of Big Pine Key, namely: (1) reduction and fragmentation of Key deer habitat; (2) interaction with people including feeding and poaching; (3) road kills; and (4) attacks by free-roaming dogs.

Consumption and Fragmentation of Key Deer Habitat

Big Pine Key has been one of the fastest growing communities in the Keys, and the recent decline in the Key deer population has largely been attributed to this growth and development. The fragmentation of Key deer habitat that is associated with the spotty, residential development on Big Pine is resulting in increased human/deer interactions as well as the reduced mobility of the animal.

Human/Deer Interaction

Extended human/deer contact, especially feeding and watering, disrupts natural deer social behavior. Human contact promotes unnaturally gregarious behavior, which increases the potential for the spread of diseases and parasites, reduces independence and individual initiative, reduces the level and variety of essential flora and fauna in the diet, and increases inbreeding (Garrett and Robertson, 1989). The result of these factors is a lowered reproductive output as well as the taming of these animals as their natural avoidance of people, dogs, and cars is reduced.

Road Kills

Road kills have accounted for approximately 862 Key deer mortalities between 1970 and 1988, representing 82 percent of total Key deer mortalities over this period. Approximately half of these road kills occurred on US 1 and approximately 20 percent occurred on Key Deer Boulevard. A number of actions could be taken to reduce the number of road kills: (1) reduce speed limits on US 1 and strict enforcement of this speed limit; (2) clear vegetation and install bicycle lanes on heavily traveled roads such as Key Deer Boulevard to discourage grazing on road shoulders adjacent to travel lanes; and (3) discourage the development of residential units north of Watson Boulevard in order to minimize traffic on Key Deer Boulevard.

Attacks by Free-Roaming Dogs

It is well known that dogs chase and kill deer, and harassment, particularly at night, may be a serious problem. Dogs on Big Pine Key have been known to chase deer into artificial waterways where drowning may occur and to pursue them into the paths of oncoming automobiles.

B. North Key Largo ACCC

The North Key Largo ACCC includes the portion of Key Largo which lies between the junction of US 1/State Road 905 and the Monroe/Dade County boundary near Angelfish Creek. The ACCC was established to reconcile the reasonable investment-backed development expectations of landowners with the need to preserve the habitat of four species of animals that are listed as endangered species: the American crocodile (Crododylus acutus), the Key Largo wood rat (Neotoma floridana smalli), the Key Largo cotton mouse (Peromyscus gossypinus allapaticola), and the Schaus' swallowtail butterfly (Heraclides aristidemus ponceanus).

The North Key Largo ACCC was established in part because it was recognized that the potential impacts of several large proposed developments, in addition to already existing developments, would threaten the survival of the four endangered species. These proposed developments were largely to be

located on land which had been subdivided prior to the designation of the four species as endangered. As these developments began to move forward, Monroe County recognized the need to evaluate the potential impacts of these developments, which included:

- (a) reduction and fragmentation of critical habitat;
- (b) increased mosquito spraying, to which the Schaus' swallowtail butterfly is highly susceptible;
- (c) degradation of nearshore water quality associated with increased runoff, septic leachate, and boat operations and maintenance; and
- (d) increased mortalities of crocodiles due to road kills as well as the potential for increased harassment or killing of crocodiles due to the incompatibility between humans and crocodiles.

Since the designation of the ACCC in 1986, the following principles have guided conservation and development in North Key Largo.

Public Acquisition of Land for Conservation Purposes

The acquisition of privately-owned lands by federal and state agencies was established as the primary vehicle for the conservation of land and critical habitat in North Key Largo. This was viewed as the most appropriate way to minimize potential impacts associated with development and human activities. This objective has largely been accomplished by the FWS and the Florida DNR. Most of the land in North Key Largo to the west of State Road 905 is currently in public ownership as part of the Crocodile Lake National Wildlife Refuge. In addition, all of the land not in IS subdivisions on the east side of State Road 905 has either been acquired or has been identified for acquisition by the Florida DNR as part of the Key Largo Hammock CARL project.

This land has been identified for acquisition by the Florida DNR because it is the best remaining example of tropical hardwood hammock in the United States, a community which is considered an environmentally endangered land (Florida DNR, 1991b). This community supports numerous plant and animal species that have very limited distributions, including several rare and endangered species (Florida DNR, 1991). To date, approximately 1,800 acres have been acquired as part of this CARL acquisition effort, including two large land areas proposed for development (Port Bougainville and Ocean Forest) which were in large measure the impetus for the ACCC designation. The North Key Largo Hammock CARL project is the second priority on the 1991 CARL Acquisition List with 1,399 acres remaining to be acquired.

Minimize Impacts of Future Residential Development

In order to minimize the impacts of residential development in North Key Largo, the permitted density for development on all privately-owned lands not located in IS subdivisions or the Ocean Reef Club ranges from one dwelling unit per 10 acres to one dwelling unit per two acres. The actual allowed density is determined by the results the Habitat Evaluation Index (HEI), found in Sections 9.5-336 through 9.5-342 of the LDRs (Monroe County BOCC, 1990).

C. Windley Key/Holiday Isles ACCC

The Windley Key/Holiday Isles ACCC includes approximately 10 acres at the southwestern end of Windley Key bordering US 1, including the Holiday Isles Resort and Marina, Howard Johnson Motor

Lodge and Restaurant, El Capitan Motel, Ables Tackle Shop, and a Chevron Service Station. The ACCC was established for the purpose of linking future growth and development within the area with internal and external circulation, adequate parking, and safe and efficient ingress and egress without interfering with the function of US 1 as an arterial.

A focal point plan has been prepared to address the traffic, pedestrian and parking concerns of the Windley Key ACCC and the acceptance of this plan by the County is currently being negotiated. As called for in this plan, satellite parking on the opposite side of US 1 from the resort complex and the addition of ingress and egress lanes to the parking area from US 1 have already been implemented. Additional satellite parking is also proposed in the plan, although negotiations are underway to ensure that this will provide adequate "peak-peak" parking. Concerns about pedestrian access across US 1 have been partially resolved through the creation of a single access point to the parking lot and a proposed tram system to move patrons from the parking area to the resort. Monroe County concerns regarding the safety of pedestrians leaving the site and returning to the satellite parking lot are currently being addressed.

D. Ohio Key ACCC

The Ohio Key ACCC was established for the purpose of reconciling the reasonable investment-backed expectations of the owners of Ohio Key with the habitat value and environmental sensitivity of the wetlands system on the Key that serves as a habitat for a variety of wading birds, including the piping plover, a species listed as threatened. The ACCC includes the southern half of Ohio Key, which encompasses approximately 22 acres, while the northern half of Ohio Key is currently developed as a recreational vehicle campground.

The piping plover is a shorebird which utilizes the stretch from the Seven-Mile Bridge to Bahia Honda as wintering grounds. According to the Atlantic Coast Piping Plover Recovery Plan, little is known about the wintering distribution and ecology of the piping plover (U.S.FWS, 1988a). Between January and March, significantly larger numbers of piping plovers occur on sandflats adjacent to beaches or coastal inlets than on beaches. Factors affecting the population in its wintering grounds include the destruction or modification of habitat due to development, shoreline stabilization structures and dredging. The Recovery Plan does not give any indication that the disturbed salt and buttonwood wetlands on Ohio Key serve as habitat for the piping plover.

Following the ACCC designation, it was determined by the BOCC that the site could support approximately 20 recreational vehicle spaces or campsites and a bathroom designed to serve the 20 spaces (Monroe County BOCC, 1990). Section 9.5-478 of the Land Development Regulations (Monroe County BOCC, 1990) describe the conditions under which the 20 recreational vehicle spaces or campsites could be developed while also protecting the piping plover habitat. These conditions include:

- (a) all development other than picnic tables, boardwalks and bird-watching blinds is restricted to the portion of the site designated as disturbed lands (see the Natural Features Map series, Map 6);
- (b) the recreational vehicle parking spaces or campsites are to be set back at least one hundred (100) feet from the dwarf mangrove area; and

- (c) proposed boardwalks and bird-watching blinds shall be reviewed and approved as a minor conditional use, subject to the conditions that the boardwalks and blinds not alter the flow of water within the Ohio Key ACCC and not interrupt wading bird use of the beach/berm, mangrove, and open water portions of the site.

In addition, the LDRs specify criteria related to fencing, motorized vehicle use, pets, dumping and filling, insecticide spraying, and the removal of exotic invasive species to further protect the piping plover (Monroe County BOCC, 1990). These conditions have been designed specifically to address the potential for adverse impacts on the piping plover, namely loss of habitat and shoreline alteration (see Conservation and Coastal Management Element Section 3.3.10). These conditions should remain in place as long as the site remains in private ownership.

In addition to the Monroe County criteria, any proposed development will be required to meet all federal, state and local regulations. When application is made in the future for building permits to construct the permitted RV/campsites, the application should be subject to the Permit Allocation System and Point System of the Comprehensive Plan. The Permit Allocation and Point System should consider assigning a negative point rating to developments which may adversely affect the piping plover on its wintering grounds. The nature of these impacts should be determined by the Monroe County Biologist in cooperation with the FWS, FGFWFC, and the National Audubon Society Research Department.

The FWS has identified the southern half of Ohio Key for acquisition due to its habitat value for the threatened piping plover.

2.1.6 Historic Resources

A. Florida Master Site File of Historic Resources in Monroe County

Currently, Monroe County does not maintain an inventory of historic resources. However, an inventory of historic resources located in Monroe County is provided by the Florida Master Site File (FMSF). This inventory, part of a statewide inventory of historic and archaeological resources, is maintained by the Florida Division of Historic Resources. In total, the FMSF currently contains 449 listings of historic resources in unincorporated Monroe County. The types of historic resources included in the FMSF are summarized below:

Archaeological Sites	322
Historic Districts	1
Historic Structures	58
<u>Historic Shipwrecks</u>	<u>68</u>
TOTAL SITES	449

Sites are added to the FMSF when completed site file forms describing the characteristics and history of the site are submitted to the Florida Department of State, Division of Historic Resources. Although the FMSF provides an extensive inventory of historic resources, the process does not evaluate the significance of listed sites. However, any sites which are listed or have been determined to be eligible for listing on the National Register are noted as such in their FMSF record.

Some sites listed in the FMSF have undergone further evaluation to determine the degree of their significance as part of the nomination process for the National Register of Historic Places or by recent county or state sponsored studies and surveys.

B. National Register Nominations

The National Register of Historic Places, established under the National Historic Preservation Act, is a list of districts, sites, buildings, structures and objects which are determined to be significant on a national, state or local level in American history, archaeology, architecture, engineering or culture. Under the criteria and procedures developed by the Secretary of the Interior, sites are listed in the National Register or determined to be eligible for listing by the Keeper of the National Register in Washington, D.C. Protection of properties listed on the National Register is limited. Federal control over development or redevelopment of privately-owned listed properties occurs only if federal funds are involved.

The National Register currently lists 12 historic resources located within the unincorporated limits of Monroe County, including mainland and off shore areas. In addition, Monroe County owns the East Martello Tower and the West Martello Tower, which are located within the City of Key West and are listed on the National Register. A list and brief description of these 14 sites are included in Table 2.7. The locations of 10 National Register sites are noted on the Recreation and Open Space Map series of the Map Atlas. The other four National Register sites are located off shore beyond the limits of the map series.

The Florida State Historic Preservation Officer (SHPO) can also make determinations of National Register eligibility. These sites meet the designation criteria established by the State of Florida, but have not as yet been officially submitted for review to the Keeper of the National Register and are not listed as eligible on the National Register. The Florida State Historic Preservation Officer (SHPO) has formally determined that two additional sites in unincorporated Monroe County are eligible for listing in the National Register. These sites are the Adderly/Rigby House (FMSF# 1256), located in Marathon, and the Alligator Reef Light House (FMSF# 1259), located off Matecumbe Key.

C. Archaeological Studies

Since 1983 the Archaeological and Historical Conservancy, Inc. (AHC) has been actively surveying historic resources in the Keys. The AHC has published two detailed surveys of archaeological sites in Monroe County (AHC, 1988 and 1990). These studies identified historic resources and evaluated resources for National Register or local register potential. Sites listed in the FMSF as well as new sites which have subsequently been listed in the FMSF were evaluated. However, off shore archaeological sites and archaeological sites within Everglades National Park and Big Cypress National Preserve were not included in the AHC surveys.

The findings of the archaeological survey for sites not currently listed or eligible for listing on the National Register are summarized in Table 2.7. Sites noted with a (*) are significant sites now in private ownership which AHC has recommended for public acquisition. Although Site #1258 Rock Mound does not appear in Table 2.7 because it is currently listed on the National Register, it is one of ten sites recommended for public acquisition by the AHC. Due to the sensitive nature of archaeological sites and their vulnerability to vandalism, the locations of these sites are not indicated on the Existing

Table 2.7

Sites Listed On the National Register of Historic Places

Master Site File Number	Name	Category	Date Listed	Location	Description
8M000015	Indian Key	A	6/19/1972	Indian Key	This site was an active colony for ship salvaging operations in the mid-1820's. In the 1830's, the colony was the Dade County seat. In 1840, Seminole Indians attacked and killed seven people, including noted botanist and explorer Dr. Henry B. Parsons.
8M000101	San Jose Wreck*	A	3/18/1975	SE of Plantation Key	On July 13, 1733 a fleet of 22 ships sailed for Havana. Twenty one were lost or crashed on reefs, including one ship loaded with silver bullion and coins. The wooden keel, lower portion of the ship's ribs and a cannon are visible.
8M000288	John Pennekamp Coral Reef State Park	A	4/14/1972	Key Largo	This park was the first undersea park designated to protect an area of seabed containing an unknown number of shipwrecks. Early aboriginal sites are believed to be located underwater in this area.
8M000211	East Martello Tower	H	6/19/1972	Key West	This Civil War structure derives its name from its design as a "martello", a fortified tower serving as an outlying defense post to the main fortress, Fort Zachary Taylor. The tower was never completed or armed. Since 1960 it has been a historical museum.
8M000221	Sand Key Lighthouse*	H	4/11/1973	Sand Key	This lighthouse is the second oldest of six remaining screw-pile lighthouses. The 132' tower contains the keeper's quarters, a spiral stair to the observation platform, a watchroom and lantern housing.
8M000228	Bat Tower	H	5/13/1982	Sugarloaf Key	The wooden tower was constructed in 1929 as part of a plan by Richard Perky to attract bats to the tower as a natural means of reducing the mosquito population. The idea was ultimately unsuccessful. The tower remains in ruins.
8M000229	Fort Jefferson National Monument*	H	11/10/1970	Dry Tortugas	The Fort was built in 1846 and used during the Civil, Spanish-American, WWI and WWII to control the entrance to the Gulf of Mexico and as a military prison. Now a museum, it consists of a massive ruined brick hexagon with walls 50' high and 8' wide.
8M000233	West Martello Tower	H	6/24/1976	Key West	This Civil War structure derives its name from its design as a "martello", a fortified tower serving as an outlying defense post to the main fortress, Fort Zachary Taylor. The tower was never completed or armed. It now houses the Key West Lighthouse Museum.
8M001131A	Long Key Bridge	H	8/13/1979	Long Key	These three bridges are surviving remnants of the Overseas railroad completed by Henry Flagler in 1912. They were part of the final segments of the Florida East Coast Railroad which linked Key West with Miami.
8M001131B	Knight Key Bridge	H	8/13/1979	Marathon Key	
8M001131C	Bahia Honda Bridge	H	8/13/1979	Spanish Harbor	
8M001258	Rock Mound	A	7/1/1975	Key Largo	The privately-owned site contains the only surviving rock mound in southeast Florida and a midden containing preserved artifacts of the period. The mound is 100 feet long and 55 feet wide and is thought to be a Glades period ceremonial center.
8M001260	Pigeon Key	D	3/16/1990	Pigeon Key	The 17 buildings and structures on Pigeon Key are all that remain of the railroad workers' camps which dotted Florida during the construction of the Florida East Coast Railway.
8M001980	Carysfort Lighthouse*	H	10/31/1964	12 miles NE of Key Largo	This lighthouse is the oldest screw-pile lighthouse in the east coast of Florida. It has operated continuously since it was constructed in 1812. The 106 foot tall structure is not occupied since the light is fully automated.

A = Archaeological Site H = Historic Structure D = Historic District

* Offshore locations not shown on the Recreation and Open Space Map series of the Map Atlas

Source: Florida Master Site File, 7/5/91

Land Use Map series but are on file at the Florida Division of Historic Resources and the Monroe County Planning Department.

D. Historic Architectural Studies

The AHC also conducted an architectural windshield survey for the Florida Keys (AHC 1988). This preliminary survey is not representative of all potentially significant structures in Monroe County. No historical research was conducted to determine date of construction or historical significance of these structures. Also excluded from the survey was a previously documented historic district in Tavernier (see Section 2.1.6E). The conclusions of the survey were based on visual inspection and a reasonable degree of historic probability. Unlike the archaeological survey, no master site file forms were filed documenting the uncatalogued resources identified as the result of the survey. Therefore, the FMSF contains listings for only 17 of the 112 structures surveyed. The survey included 13 structures which are currently listed or eligible for listing on the National Register (nine buildings on Pigeon Key, Rigby House, Bat Tower, Bahia Honda and Knight Key Bridges). The results of the Architectural Windshield Survey for the remaining 99 sites are summarized below:

Hurricane Houses Potentially Eligible for National Register Thematic Listing and Local Register Listing	7 structures
Bridges Potentially Eligible for National Register Thematic Listing and Local Register Listing	12 bridges
Structures Potentially Eligible for National Register Listing and Local Register Listing	13 structures
Structures Potentially Eligible for Local Register Listing Only	22 structures
Structures Potentially Eligible for Local Historic District Only	4 structures in Islamorada 18 structures on Conch Key 4 structures in Marathon
Structures Requiring Additional Data	1 structure
Structures Not Recommended for Preservation	18 structures

E. Historic District Studies

Tavernier Survey Study

In 1984 the Historic Florida Keys Preservation Board conducted a survey of a 75-acre tract within the town of Tavernier. The purpose of this survey was to:

- (a) identify sites, structures and buildings of historic, architectural or historic merit;
- (b) to complete site file forms for buildings and sites identified; and
- (c) to determine if the district could be nominated to the National Register.

Table 2.8

Historic Sites Included in AHC Archaeological Survey

Master Site File Number	Name	Category	Location	Ownership
Sites Identified in the AHC Survey to be Eligible or Potentially Eligible for Listing on the National Register and Worthy of Local Designation - 20 Sites				
8MO00002	Stock Island Midden	Archeological Site	Stock Island	Private
8MO00004	Sugarloaf Key #1	Archeological Site	Sugarloaf Key	Private*
8MO00007	Watson's Hammock (Big Pine Key #1)	Archeological Site	Big Pine Key	FWS
8MO00009	Key Vaca #1, Calusa Wells	Archeological Site	Key Vaca	Private*
8MO00013	Lignumvitae Key Mound	Archeological Site	Lignumvitae Key	State
8MO00014	Lignumvitae Key Stone Structure	Archeological Site	Lignumvitae Key	State
8MO00016	Tea Table Key	Archeological Site	Tea Table Key	Private*
8MO00017	Upper Matecumbe	Archeological Site	Upper Matecumbe Key	Private*
8MO00018	Whale Harbor	Archeological Site	Upper Matecumbe Key	Unknown
8MO00025	Key Largo #1	Archeological Site	Key Largo	Private*
8MO00124	West Summerland Key	Archeological Site	West Summerland Key	Private*
8MO00127	Dynamite Rock	Archeological Site	Key Largo	State
8MO00128	Atlantic	Archeological Site	Key Largo	Private
8MO01267	Boca Chica #2, Boca Chica Mounds	Archeological Site	Boca Chica	Navy
8MO01274	Little Pine Key #3	Archeological Site	Little Pine Key	FWS
8MO02051	Card Sound Road Extension Site	Archeological Site	Key Largo	State
8MO02055	Goodie, (Rose Marie Site)	Archeological Site	Key Largo	Unknown
8MO02060	Newport Plantation	Archeological Site	Key Largo	Private*
8MO02061	Thorn Site	Archeological Site	Key Largo	Private*
8MO02088	Long Key #1	Archeological Site	Long Key State Park	State
Sites Identified in the AHC Survey As Worthy of Local Designation - 36 Sites				
8MO00005	Cudjoe Key #1	Archeological Site	Cudjoe Key	Private
8MO00010	Key Vaca #2	Archeological Site	Key Vaca	Private
8MO00012	Lower Matecumbe Key #1	Archeological Site	Lower Matecumbe Key	Private
8MO00020	Plantation Key #1	Archeological Site	Plantation Key	Private
8MO00021	Plantation Key #2	Archeological Site	Plantation Key	Private
8MO00077	Knights Key	Archeological Site	Knights Key	Private
8MO00117	Little Fat Deer Key	Archeological Site	Little Fat Deer Key	Private
8MO01262	Big Pine Key #9	Archeological Site	Big Pine Key	Private?
8MO01265	Big Pine Key #12, Water Tower	Historic Structure	Oleander St. Big Pine Key	Private
8MO01961	Windley Key Quarry	Archeological Site	Windley Key	Private*
8MO01965	Port Bougainville #1	Archeological Site	Key Largo	State
8MO01966	Port Bougainville #2	Archeological Site	Key Largo	State
8MO01970	Garden Cove	Archeological Site	Key Largo	Private
8MO01972	Laura Planter	Archeological Site	Key Largo	Private
8MO01978	Pumpkin Key	Archeological Site	Adjacent to Key Largo	Private
8MO02052	Litman Site	Archeological Site	Key Largo	Private
8MO02054	Jeffreys Site	Archeological Site	Key Largo	Unknown
8MO02057	Rose Marie Solution Hole Cistern	Archeological Site	Key Largo	Private
8MO02058	Gun Range Cistern	Archeological Site	Key Largo	Private
8MO02063	Harry Harris	Archeological Site	Key Largo	County?
8MO02067	Swine	Archeological Site	Key Largo	Private
8MO02069	Camp Key Largo	Archeological Site	Key Largo	Private
8MO02071	McClellan	Archeological Site	Key Largo	Private
8MO02089	Key Vaca #3, Crane Hammock #1	Archeological Site	Marathon Key	Private*
8MO02094	Twin Cisterns Homestead	Archeological Site	Upper Matecumbe	Private
8MO02095	Stone Tower Site	Archeological Site	Plantation Key	Private
8MO02096	East Matecumbe	Archeological Site	Lower Matecumbe	Private
8MO02101	Big Pine Key #3	Archeological Site	Big Pine Key	Private?
8MO02105	Big Pine Key #7	Archeological Site	Big Pine Key	Unknown
8MO02106	Big Pine Key #8	Archeological Site	Big Pine Key	Private

Table 2.8

Historic Sites Included in AHC Archaeological Survey

Master Site File Number	Name	Category	Location	Ownership
8MO02107	Big Torch Key #1	Archeological Site	Big Torch Key	Unknown
8MO02108	Big Torch Key #2	Archeological Site	Big Torch Key	Unknown
8MO02111	Ramrod Key #1	Archeological Site	Ramrod Key	Private
8MO02113	Ramrod Key #3	Archeological Site	Ramrod Key	Private
8MO02114	Cudjoe Key #2	Archeological Site	Cudjoe Key	Private
8MO02116	Plantation Key #6	Archeological Site	Plantation Key	Private
Sites Identified in the AHC Survey As Potentially Worthy of Local Designation - 5 Sites				
8MO02068	Black Lowe	Archeological Site	Key Largo	Private
8MO02070	North Tavernier	Archeological Site	Key Largo	Private
8MO02092	Boot Key #1	Archeological Site	Marathon Key	Private
8MO02103	Big Pine Key #5	Archeological Site	Big Pine Key	Private
8MO02110	Little Torch Key #2	Archeological Site	Little Torch Key	Private
Sites Requiring Further Research or Recommended for Preservation, Monitoring or Excavation - 53 Sites				
no site file #	Cudjoe Key #3 (Old Sugarloaf RR Station)	Historic Structure	Cudjoe Key	Private
8MO00003	Boca Chica Stone Circle	Archeological Site	Boca Chica Key	Navy
8MO00006	Ramrod Key #6	Archeological Site	Ramrod Key	Private
8MO00008	Big Pine Key #2	Archeological Site	Big Pine Key	Unknown
8MO00019	Windley Key	Archeological Site	Windley Key	Private
8MO00023	Plantation Key #4 (double listed in Master Site File - #200)	Archeological Site	Plantation Key	Private
8MO00024	Plantation Key #5	Archeological Site	Plantation Key	Unknown
8MO00028	Key Largo #4	Archeological Site	Key Largo	Unknown
8MO00246	Water Key	Archeological Site	Water Key	FWS
8MO01261	Big Coppitt #1	Archeological Site	Big Coppitt Key	County?
8MO01263	Big Pine Key #10	Archeological Site	Big Pine Key	State
8MO01264	Big Pine Key #11	Archeological Site	Big Pine Key	County?
8MO01266	Big Pine Key #13	Archeological Site	Big Pine Key	FWS
8MO01268	Boca Chica #3	Archeological Site	Boca Chica Key	Navy?
8MO01269	Cudjoe Key #4, Drust Well	Archeological Site	Cudjoe Key	Private
8MO01271	Holiday Key	Archeological Site	Holiday Key	Unknown
8MO01272	Little Pine Key #1	Archeological Site	Little Pine Key	FWS
8MO01273	Little Pine Key #2	Archeological Site	Little Pine Key	FWS
8MO01275	Little Pine Key #4	Archeological Site	Little Pine Key	FWS
8MO01277	Middle Torch Key #1	Archeological Site	Middle Torch Key	Unknown
8MO01278	No Name Key #1	Archeological Site	No Name Key	FWS
8MO01279	No Name Key #2	Archeological Site	No Name Key	FWS
8MO01280	No Name Key #3	Archeological Site	No Name Key	FWS
8MO01281	No Name Key #4	Archeological Site	No Name Key	FWS
8MO01282	No Name Key #5	Archeological Site	No Name Key	FWS
8MO01283	No Name Key #6	Archeological Site	No Name Key	FWS
8MO01284	No Name Key #7, Matkovich House Site	Archeological Site	No Name Key	FWS
8MO01285	No Name Key #8, Dominguez Well Site	Archeological Site	No Name Key	FWS
8MO01286	Ramrod Key #4	Archeological Site	Ramrod Key	Private
8MO01287	Ramrod Key #5	Archeological Site	Ramrod Key	Navy?
8MO01288	Sawyer Key Homestead	Archeological Site	Sawyer Key	Private?
8MO01291	Sugarloaf Key #3	Archeological Site	Sugarloaf Key	State
8MO01292	Sugarloaf Key #4	Archeological Site	Sugarloaf Key	Unknown
8MO01293	Sugarloaf Key # 5	Archeological Site	Sugarloaf Key	Private/State
8MO01294	West Summerland Key #2	Archeological Site	West Summerland Key	Private
8MO01981	Big Munson Key	Archeological Site	Big Munson Key	Private
8MO02056	Norman Site	Archeological Site	Key Largo	Unknown
8MO02065	Ocean Side	Archeological Site	Key Largo	Private

Table 2.8

Historic Sites Included in AHC Archaeological Survey

Master Site File Number	Name	Category	Location	Ownership
8MO02066	Newport #2	Archeological Site	Key Largo	Private
8MO02072	Sunland South	Archeological Site	Key Largo	Unknown
8MO02073	Gulfstream	Archeological Site	Key Largo	Private
8MO02074	Tavernier	Archeological Site	Key Largo	Private
8MO02075	Lake Surprise	Archeological Site	Key Largo	Private
8MO02090	Key Vaca #4	Archeological Site	Marathon Key	County
8MO02091	Crawl Key #1	Archeological Site	Marathon Key	Unknown
8MO02093	Fat Deer #1	Archeological Site	Marathon Key	Private
8MO02098	Windley Key Shell Scatter	Archeological Site	Windley Key	Private
8MO02102	Big Pine Key #4	Archeological Site	Big Pine Key	Private
8MO02104	Big Pine Key #6	Archeological Site	Big Pine Key	Unknown
8MO02109	Little Torch Key #1, Gato Farms	Archeological Site	Little Torch Key	Private
8MO02112	Ramrod Key #2	Archeological Site	Ramrod Key	Private
8MO02115	Sugarloaf Key #2	Archeological Site	Sugarloaf Key	FWS
8MO02117	Bahia Honda #1	Archeological Site	Bahia Honda Key	State
Sites Identified in the AHC Survey as Recommended for No Action - 4 Sites				
8MO00022	Plantation Key #3	Archeological Site	Plantation Key	Private
8MO00076	Lower Matecumbe #2	Archeological Site	Lower Matecumbe Key	Private
8MO02053	Carysfort Site	Archeological Site	Key Largo	Unknown
8MO02064	North Largo or Twisted Cistern Site	Archeological Site	Key Largo	Private
Sites Identified in the AHC Survey as Destroyed - 2 Sites				
8MO01968	Sherd	Archeological Site	Key Largo	State
8MO02062	Ocean Reef	Archeological Site	Key Largo	Private

Note: This list does not contain sites included in the AHC Survey which are currently listed or have been determined to be eligible for listing on the National Register of Historic Places by the Keeper or SHPO.

Source: Florida Master Site File, 7/5/91
AHC Archaeological Surveys, 1988, 1990

The study identified 32 individual buildings which are contributory to the historic or architectural character of Tavernier (see Table 2.9). The study concluded that a Tavernier Historic District would not meet National Register criteria, but recommended that a certified local historic district be established for Tavernier to enable the district to qualify for historic preservation grants-in-aid. No action to establish Tavernier as a certified local historic district has been taken to date.

Pigeon Key

Pigeon Key, once a work camp for the Overseas Railroad, has been the focus of Monroe County's most recent historic preservation efforts. In 1987 the County established the Pigeon Key Advisory Authority (PKAA) to manage the county-owned island. Aside from Tavernier, it is the only area within unincorporated Monroe County to be evaluated as a historic district. The Historic Florida Keys Preservation Board compiled the historic data and application materials necessary to nominate the Pigeon Key Historic District to the National Register. A National Register designation was conferred in 1990. The tiny island is currently used as a marine research facility and to host meetings and social events for a limited number of County and community groups.

The Pigeon Key Consulting Team, Dennis Beebe, Architect, P.A. et al, completed a county-funded study of Pigeon Key in April 1991. The study recommended the establishment of a Pigeon Key Living

Museum and the reservation of some facilities for use as an educational retreat. Initially, the plan would stabilize buildings and begin tram service to the island. Subsequent phases called for the restoration of buildings and the addition of educational and interpretive exhibits on the island and on the adjacent Knight Key. The plan was never formally adopted by the PKAA. Recently, the PKAA was disbanded and the future program and management of Pigeon Key is yet to be decided.

F. Other Historic Preservation Efforts in Monroe County

Land Development Regulations

Article VIII (Sections 9.5-451 to 9.5-454) of the Monroe County LDRs includes a procedure for designating and protecting archaeological, historical and cultural landmarks (Monroe County BOCC, 1990). This article sets forth three standards, only one of which must be met to qualify for local designation:

- (a) the site or structure is associated with an event of historical significance to the cultural, social or political history of Monroe County;
- (b) the site evidences the presence of early Indian or pioneer settlements; and/or
- (c) the structure reflects an architectural style or type that is unique, distinct or of traditional Florida Keys character.

Local landmark designation may be proposed by the BOCC, the Planning Department, or any Monroe County citizen. The Florida Keys Historic Preservation Board and the Director of Planning would review the proposal and make a recommendation to the Planning Commission. The Planning Commission, after holding a public meeting, would make its recommendation to the BOCC, the local governing body responsible for designating local landmarks.

Table 2.9

Historic Structures in Proposed Tavernier Historic District

Master Site File Number	Name	Category	Location	Ownership
8MO01982	Parsonage	Historic Structure	148 Atlantic Circle Drive	Private
8MO01983	166 Atlantic Circle	Historic Structure	166 Atlantic Circle Drive	Private
8MO01984	OM Woods House	Historic Structure	189 Beach Street	Private
8MO01985	Station Masters House	Historic Structure	198 Beach Street	Private
8MO01986	Geiger Packing House	Historic Structure	105 Coconut Row	Private
8MO01987	129 Coconut Row (1)	Historic Structure	129 Coconut Row	Private
8MO01988	110 Lowe Street	Historic Structure	110 Lowe Street	Private
8MO01989	114 Lowe Street	Historic Structure	114 Lowe Street	Private
8MO01990	180 Lowe Street	Historic Structure	180 Lowe Street	Private
8MO01991	181 Lowe Street	Historic Structure	181 Lowe Street	Private
8MO01992	Red Cross House	Historic Structure	184 Lowe Street	Private
8MO01993	Alice Lowe House (Red Cross House)	Historic Structure	224 Ocean Trail	Private
8MO01994	131 Ocean View Drive	Historic Structure	131 Ocean View Drive	Private
8MO01995	Tavernier Methodist Church	Historic Structure	91701 Overseas Hwy	Old Town Tavernier Assoc.
8MO01996	Tavernier Hotel	Historic Structure	91865 Overseas Hwy	Private
8MO01997	Merlin Albury House	Historic Structure	91931 Overseas Hwy	Old Town Tavernier Assoc.
8MO01998	Old Tavernier Post Office	Historic Structure	91951 Overseas Hwy	Private
8MO01999	Willard Albury House	Historic Structure	91991 Overseas Hwy	Private
8MO02000	JV Albury House	Historic Structure	92001 Overseas Hwy	Private
8MO02001	118 Sunrise Drive	Historic Structure	118 Sunrise Drive	Private
8MO02002	120 Sunrise Drive	Historic Structure	120 Sunrise Drive	Private
8MO02003	Robert Porter Allen House	Historic Structure	129-133 Sunrise Drive	Private
8MO02004	Cliff Carpenter House	Historic Structure	Sunrise Drive	Private
8MO02005	Cliff Carpenter Shed	Historic Structure	Sunrise Drive and U.S. 1	Private
8MO02006	256 Tarpon Drive	Historic Structure	256 Tarpon Drive	Private
8MO02007	114 Tavernier Drive	Historic Structure	114 Tavernier Drive	Private
8MO02008	120 Tavernier Drive	Historic Structure	120 Tavernier Drive	Private
8MO02009	Charles Albury House	Historic Structure	132 Tavernier Drive	Private
8MO02010	Wilkinson House	Historic Structure	135 Tavernier Trail	Private
8MO02011	136 Tavernier Drive	Historic Structure	136 Tavernier Drive	Private
8MO02012	140 Tavernier Drive	Historic Structure	140 Tavernier Drive	Private
8MO02013	Rodney Albury House	Historic Structure	Overseas Highway	Private

(1) Not included in the Tavernier Survey Study but is listed in the FMSF

Source: Tavernier Survey Study, Historic Florida Keys Preservation Board, 1984
Florida Master Site File, 7/5/91

Once a site or structure is designated a local landmark, no development is permitted unless it protects the landmark and is compatible with the archaeological, historical or cultural character of the landmark, or the development is approved as a minor conditional uses.

To date, the BOCC has designated only a few archaeological, historical or cultural landmarks. Most recently, in December 1991 the BOCC designated the Long Key Overseas Railroad Viaduct, the Seven-Mile Overseas Railroad Bridge, and the Bahia Honda Overseas Railroad Bridges as historic and cultural landmarks.

Once designated, the current Land Development Regulations require that any proposed development on a landmark site must proceed through the minor conditional use approval process. Development can only be approved if it is "designed to protect the archaeological, historical or cultural character of the designated landmark," and is compatible in "style, design, architecture and color" with the character of the landmark. Because of the vagueness of these current regulations, they provide little protection for the resources, and are difficult to implement.

Historic Preservation Ordinance

The Matecumbe Historical Society has completed a draft Historic Preservation which outlines the establishment of:

- (a) a historic preservation board;
- (b) a process and criteria to designate individual sites, districts and archaeological zones;
- (c) a process of review of certificates of appropriateness and certificates to dig; and
- (d) a process for appeals.

The current regulations and the draft ordinance should be expanded and refined in order to provide more detail regarding the process for designating landmarks, the measures for landmark protection, and the procedure for monitoring and enforcement of the ordinance.

G. Historic Preservation Groups

The following groups are increasingly important resources for the preservation of historic resources in Monroe County. The organizations include professionally staffed non-profits, citizen membership groups, scholarly and professional associations, government agencies, and grass-roots advocates. These groups can contribute a variety of services and skills to the historic preservation effort including financial support, technical assistance, increasing public awareness, and scholarly research.

Because the County does not have staff or budget to support a full historic preservation program, the County must rely on the resources of these groups for funding and initiating and performing much of the actual historic preservation work.

National Organizations

National Trust for Historic Preservation

The National Trust for Historic Preservation is a private, non-profit national organization established by U.S. Congress in 1949. The mission of this organization is to encourage public participation in preservation activities, own and maintain historically significant properties, and provide technical assistance and funding for preservation projects. The Trust publishes a Preservation News, Historic Preservation Magazine, and Preservation Law Reporter. Monroe County is under the jurisdiction of the Southern Regional Office located in Charleston, South Carolina.

U.S. Department of the Interior

The U.S. Department of the Interior is the primary federal agency with responsibility for historic preservation. This department expands and maintains the National Register of Historic Places and oversees the development of State Historic Preservation Programs.

Society of Professional Archaeologists

The Society of Professional Archaeologists is a national organization which establishes standards used by state and federal governments to determine qualifications and experience necessary for professional archaeologists. The Society also publishes a monthly newsletter providing the latest development in the field of archaeology.

State and Regional Groups

The Archaeological and Historical Conservancy, Inc.

The Archaeological and Historical Conservancy (AHC) is a private not-for-profit organization dedicated to the preservation of archaeological and historic sites. The AHC conducts archaeological and historic surveys on properties for private landowners, developers, and government agencies. The AHC has been involved in the previously discussed, on-going survey of historic and archaeological sites in the Florida Keys since 1985. This primary emphasis of this survey has been archaeological sites. It is a source of information on the location, degree of disturbance, and potential significance of archaeological sites in Monroe County.

The Florida Anthropological Society

The Florida Anthropological Society, founded in 1948, is a private, not-for-profit membership organization. The organization publishes a quarterly scholarly journal, The Florida Anthropologist, which contains articles written by professional and amateur members on Florida archaeology.

The Florida Archaeological Council

The Council is a professional organization for practicing archaeologists in Florida. Membership is limited to qualified archaeologists. The Council can provide lists of professional archaeologists as well as suggest archaeologists for particular areas and expertise.

The Florida Department of the State, Division of Historic Resources

The Division of Historic Resources has statewide responsibility for the National Register program in Florida, as well as awarding and administering grants for historic preservation purposes. The State Historic Preservation officer (SHPO), the Bureau of Archaeological Research, and the Bureau of Survey and Registration are contained within the division. This office maintains the Florida Master Site File (FMSF) inventory and serves as a clearinghouse for information on archaeological sites and

historic structures. The FMSF is a repository for information submitted to the Division of Historic Resources on sites considered to be historically or archaeologically significant. The FMSF collects, organizes, and disseminates information. However, the FMSF does not determine the significance of a site or its eligibility for local, state or federal designations.

The Florida Folklore Society

The Florida Folklore Society is a private, non-profit organization dedicated to the study and appreciation of folklore and folklife of the State of Florida. The Society collects and distributes information on Florida folklore and folklife to members and the public.

The Florida Trust for Historic Preservation

The Florida Trust for Historic Preservation is a state-wide, non-profit preservation organization which began in 1978. The mission of this organization is educate the public about the state's historic resources, promote, advocate, to provide information regarding the preservation of historic resources, and to support local preservation activities. The Trust administers a revolving fund for the purchase of options on endangered historic properties until a buyer sensitive to preservation issues can be found. The Trust also administers a facade easement program which enables the Trust to protect the facades of historic buildings.

The Trust actively educates the Florida legislature about historic preservation issues and encourages all levels of government to support preservation of historic resources. Other activities of the Trust include an annual meeting, an annual awards program to recognize significant contributions to historic preservation, and the restoration and management of several historic properties in Florida.

Florida Historical Society

The Florida Historical Society is a state-wide organization that focuses on the promotion of and publications about the history of Florida. In addition to publishing the Florida Historical Quarterly, a professional level journal, the Society holds annual meeting and workshops.

Historical Association of Southern Florida

The Historical Association of Southern Florida was founded in 1940 by a group of citizens interested in preserving the history of Southern Florida and the Caribbean. The HASF's Historical Museum of Southern Florida represent the full range of history from prehistoric to contemporary societies. The museum library is the largest repository of materials devoted to the history of the region. Many publications are produced by the HASF: a scholarly journal (Tequesta), a popular history quarterly (South Florida History Magazine), a quarterly membership newsletter (Currents), and a series of guidebooks on the neighborhoods and waterways of the region.

South Florida Regional Planning Council

The South Florida Regional Planning Council, in conjunction with Monroe County, commissioned the Archaeological and Historical Conservancy's cultural resource survey of the Florida Keys.

Local Groups

Friends of Islamorada State Parks

The Friends of Islamorada State Parks is a citizens' group interested in the protection of archaeological resources in nearby state parks (Robert Carr, AHC, personal communication).

Historic Florida Keys Preservation Board

The Historic Florida Keys Preservation Board (HFKPB) was created by state law in November 1972. It was formed to research, acquire, preserve, restore, maintain, reconstruct and operate historic sites, buildings and property throughout Monroe County. The seven member Board is appointed by the Governor, and directs the small, professional staff. Past projects have included the restorations of the Bat Tower on Sugarloaf Key, Old City Hall, the Oldest House, the Armory and the San Carlos Institute, a historic survey of Tavernier, the Signalization Technical Advisory Panel, the Cemetery Restoration Project, and a Historic Architectural Review Commission Guidelines Grant. The HFKPB compiled and submitted a National Register application for Pigeon Key, which was recently nominated to the National Register. The staff provides information to officials and the public through preservation seminars, and advice on historic research, tax credits, grants. The HFKPB is currently drafting a local historic designation program for Monroe County which is scheduled to be completed by the end of 1991.

Historical Preservation Society of the Upper Keys

The Historic Preservation Society of the Upper Keys (HPSUK) is a non-profit citizens' organization dedicated to the identification and preservation of historic resources in the Upper Keys. The HPSUK recently petitioned the Monroe BOCC to designate three of Henry Flagler's overseas railroad bridges as local landmarks under the provisions of the County's LDRs.

Historic Preservation Advisory Council

The Historic Preservation Advisory Council was established through the Florida Historical Resources Act to be responsible for enhancing public participation in the preservation and protection of the state's archaeological and historic resources. The members are appointed by the Secretary of State and are provided with staff assistance from the Division of Historic Resources. The Council's main objective is to establish priorities for identifying, acquiring and protecting historic resources; evaluating applications for state historic markers; evaluating applications for historic preservation grants-in-aid; formulating public goals for preservation and promoting public awareness and participation; and preparing historic preservation rules at the state level.

The Key West Maritime Heritage Society, Inc.

The Key West Maritime Heritage Society was founded in 1982 as a non-profit educational institution to accumulate and disseminate information on Spanish Maritime and Colonial activity in the New World.

The Society is particularly interested in the preservation and conservation of maritime archaeological sites. The Society's activities involve conservation and exhibition of artifacts raised from two Spanish Galleons and an English slave ship. The Society plans to begin an extensive educational program which will be coordinated with the school districts in the Lower Keys.

Matecumbe Historical Board

This organization recently submitted a historic preservation ordinance to the Monroe County BOCC for their consideration.

Monroe County Tourist Development Council

The Tourist Development Council can be a funding source for historic preservation projects which aid or enhance tourism opportunities.

Old Tavernier Town Association

The Old Tavernier Town Association was formed to preserve the remaining 1930's buildings in Tavernier. Based on the Historic Florida Keys Preservation Board Survey of Tavernier (1984), the group filed a National Register Nomination form and supporting documentation for listing a Tavernier Historic District on the National Register of Historic Places. The nomination was rejected.

Pigeon Key Advisory Authority

The Pigeon Key Advisory Authority (PKAA) was appointed by the Monroe County BOCC in 1987 to manage and form future plans for Pigeon Key, a county-owned historic site. The PKAA was disbanded in February 1992.

H. Analysis of Future Need

The County has made progress in the area of historic preservation, but large information gaps remain in the inventory, designation, and protection of historic resources. There is a complete lack of formal public education and intergovernmental coordination programs to promote historic preservation.

Inventory of Historic Resources

The majority of archaeological sites have been surveyed and recorded in the FMSF. However, apart from Tavernier, much further study of architectural resources is needed. The structures identified in the AHC Architectural Windshield Survey require additional research to firmly establish their significance. All Keys need to be more rigorously surveyed to identify sites the windshield survey may have missed. FMSF forms for architectural resources should be submitted to the Division of Historic Resources so that any historic structures and districts identified in surveys are recorded in the FMSF.

The County has yet to establish an in-house inventory of historic resources. This base of information is critical to the County's future ability to implement a local register program and a Historic Preservation Ordinance. An in-house inventory, using the Florida Master Site File as a starting point, is needed to aid the flow of information about historic resources to other county departments and private landowners.

Designation of Historic Resources

The recommendations contained in the AHC Archaeological Surveys provides sufficient justification for nominating many archaeological sites to the National Register and/or a local Monroe County register. There is also sufficient information provided by the Historic Florida Keys Preservation Board Study to create a certified local historic district in Tavernier and to nominate this district to the local register. Some archaeological sites and all the historic structures identified in the AHC Architectural Windshield Survey will require additional research to firmly establish their significance and to support nominations.

Management of County-owned Historic Resources

Pigeon Key is the only National Register Historic District in unincorporated Monroe County and is currently owned by the County. The recent disbandment of the Pigeon Key Advisory Authority has left this important resource without a management organization to make decisions and recommendations for the future. The County should decide quickly if Pigeon Key's future manager will be the County, state or non-profit agency. Identification of a future organization responsible for managing this

resource is urgently needed so that structural stabilization and rehabilitation work may begin as soon as possible.

Public Education

The County has no ongoing public awareness program for historic preservation. Because of the limited staff and budget, the County can best support public awareness through supporting the efforts of locally based historic preservation organizations. The County needs to strengthen its relationship with these organizations as well as provide information, technical assistance, and funding support for the historic preservation efforts of these organizations.

Intergovernmental Coordination

Many of the historic resources in Monroe County are located on federal and state lands. The County needs to increase their coordination with public agencies to ensure that historic resources are identified and protected.

2.1.7 Economic Conditions and Trends

The Monroe County economy is unique in a number of respects due to the County's location and its geography. Monroe County's economy is dominated by the tourism industry, and the County attracts both seasonal residents and short-term visitors by virtue of its unique array of recreational resources. Other key sectors which historically have influenced the County's economy include the U.S. Navy and the commercial fishing industry. The Monroe County economic base expanded during the 1980's, outperforming the state and the nation in terms of employment growth, unemployment levels and increases in per capita income. Selected components of the economic base and key trends are discussed in the following paragraphs.

A. Employment Characteristics and Key Industry Profiles

Employment trend data by place of work are provided by the Bureau of Economic Analysis (BEA) in the U.S. Department of Commerce. These data present a comprehensive range of economic characteristics for counties, including full- and part-time employment. Table 2.10 summarizes the distribution of Monroe County employment and growth trends by industry for the period from 1970 through 1989. During the 1980's employment growth in Monroe County outpaced permanent population growth, increasing at an average annual compound rate of over four percent. Figure 2.1 graphically illustrates the patterns of change in private and public sector employment in comparison to changes in the population of the unincorporated area.

Employment growth during the past decade was led by the Services, Retail Trade, Finance, Insurance and Real Estate and Construction industries as illustrated in Table 2.10. These sectors accounted for nearly 80 percent of net growth in employment during the period from 1980 through 1989.

The services sector is the largest segment of the private sector followed by retail trade, reflecting the dominance of the tourism industry. These industries account for nearly 52 percent of total public and private sector employment and approximately 67 percent of total private sector employment.

Unemployment in Monroe County has remained two to three percentage points below statewide and national levels in recent years. As shown in Table 2.10, the composition of the County's economy has shifted during the last fifteen years. During the five year period between 1970 and 1975, total

employment increased by only five percent. However, employment shifted away from the public sector to the private sector, resulting in a net increase of 33 percent in private industries. A fifty percent reduction in military personnel and a related decrease in federal civilians (22 percent) accounted for the change.

This decline in public sector employment continued through 1980. As noted previously, retail trade and services represented the largest share of total employment, reflecting national trends, as well as the strength of the local tourism industry. Total employment increased twenty-four percent from 1980 to 1985. Employment in the private sector increased by thirty percent, while the public sector grew by nine percent. Both federal government and transportation/public utility employment showed healthy increases. Private industry continued to be dominated by the retail and service industries, although commercial fishing, F.I.R.E. and construction were also significant growth segments in this period.

Tourism

Tourism is the dominant factor in the Monroe County economy. There are numerous and varied indicators of the importance of the tourism industry in Monroe County ranging from the scope of tourist infrastructure such as hotels and other lodging facilities to visitation statistics at parks and attractions.

There are approximately 175 licensed hotel and motels in Monroe County with a total of over 7,200 rooms. Monroe County's inventory of hotel/motel units increased 32 percent from 1981 to 1990. Additionally, there are approximately 2,800 campsites in Monroe County accommodating visitors year-round. Hotel bed tax collections, which are affected by both guest volume and prices, increased by about 68 percent or approximately 19 percent per year between 1987 and 1990.

Retail eating and drinking establishments, which are also heavily influenced by tourist activity, increased in number by about 45 percent from 1981 to over 550 facilities with over 35,000 seats in 1989. Reported sales of eating and drinking establishments in Monroe County increased by about 68 percent between 1983 and 1990 which represents an average annual increase of about 7.7 percent.

The number of visitors to state parks in Monroe County increased by nearly 240 percent between 1980 and 1990 to approximately 2.0 million visitors annually. The John Pennekamp Coral Reef State Park accounts for about 70 percent of total state park visitation in Monroe County.

A recent study performed for the U.S. Department of Interior, Division of Minerals Management concluded that approximately one-third of the Monroe County economy is dependent upon recreation-related tourism and that a conservative estimate of the net present value of the Florida Keys for beach activities, saltwater fishing and scuba and snorkel diving is about \$22 billion. (Kearney/Centaur, 1990).

The above noted study also indicated that in 1990 an estimated 1.9 million visitors spent about 12.9 million days in the Florida Keys and had a direct spending impact of about \$733 million.

Commercial Fishing

Commercial fishing represents nine percent of the Monroe County private sector employment. The 1991 Monroe County Statistical Abstract indicates that the 1990 commercial fish value was \$39.8 million, an 18 percent increase from 1980 (Table 2.11). Total commercial fish poundage has declined approximately 22 percent during that same time period. The fish value only accounts for the price of fish paid to the commercial fishermen and does not include a multiplier effect of sales to restaurants,

Table 2.10

Monroe County Employment Profile 1970-1989 (1)

	1970	1975	Percent Change 1970-75	1980	Percent Change 1975-80	1985	Percent Change 1980-85	1989	Percent Change 1985-89
Private Sector									
Ag Svcs/Fishing (2)	776	1,490	92.0%	2,697	81.0%	3,929	45.7%	3,337	-15.1%
Mining	114	10	-91.2%	11	10.0%	48	336.4%	59	22.9%
Construction	1,022	1,141	11.6%	1,851	62.2%	2,570	38.8%	2,915	13.4%
Manufacturing	551	820	48.8%	940	14.6%	754	-19.8%	809	7.3%
Wholesale	495	685	38.4%	702	2.5%	829	18.1%	808	-2.5%
Retail	4,076	5,048	23.8%	6,769	34.1%	8,464	25.0%	10,669	26.1%
FIRE (3)	829	1,360	64.1%	2,477	82.1%	3,360	35.6%	3,942	17.3%
Services (4)	4,430	5,781	30.5%	8,077	39.7%	10,572	30.9%	13,631	28.9%
Subtotal	12,293	16,335	32.9%	23,524	44.0%	30,526	29.8%	36,170	18.5%
Public Sector									
Fed. civilians	1,724	1,342	-22.2%	935	-30.3%	1,228	31.3%	1,305	6.3%
Military	7,435	3,743	-49.7%	2,610	-30.3%	2,834	8.6%	3,306	16.7%
State/local (5)	2,334	3,459	48.2%	3,774	9.1%	3,774	0.0%	4,387	16.2%
Trans./util (6)	745	792	6.3%	1,214	53.3%	1,481	22.0%	1,986	34.1%
Subtotal	12,238	9,336	-23.7%	8,533	-8.6%	9,317	9.2%	10,984	17.9%
Total Employment	24,531	25,671	4.6%	32,057	24.9%	39,843	24.3%	47,154	18.3%

(1) Full- and part-time employees and proprietors by major industry.

(2) County figures for fisheries and forestry only.

(3) Finance, Insurance, Real Estate includes banking, credit agencies, insurance services and holding and other investment companies, among others.

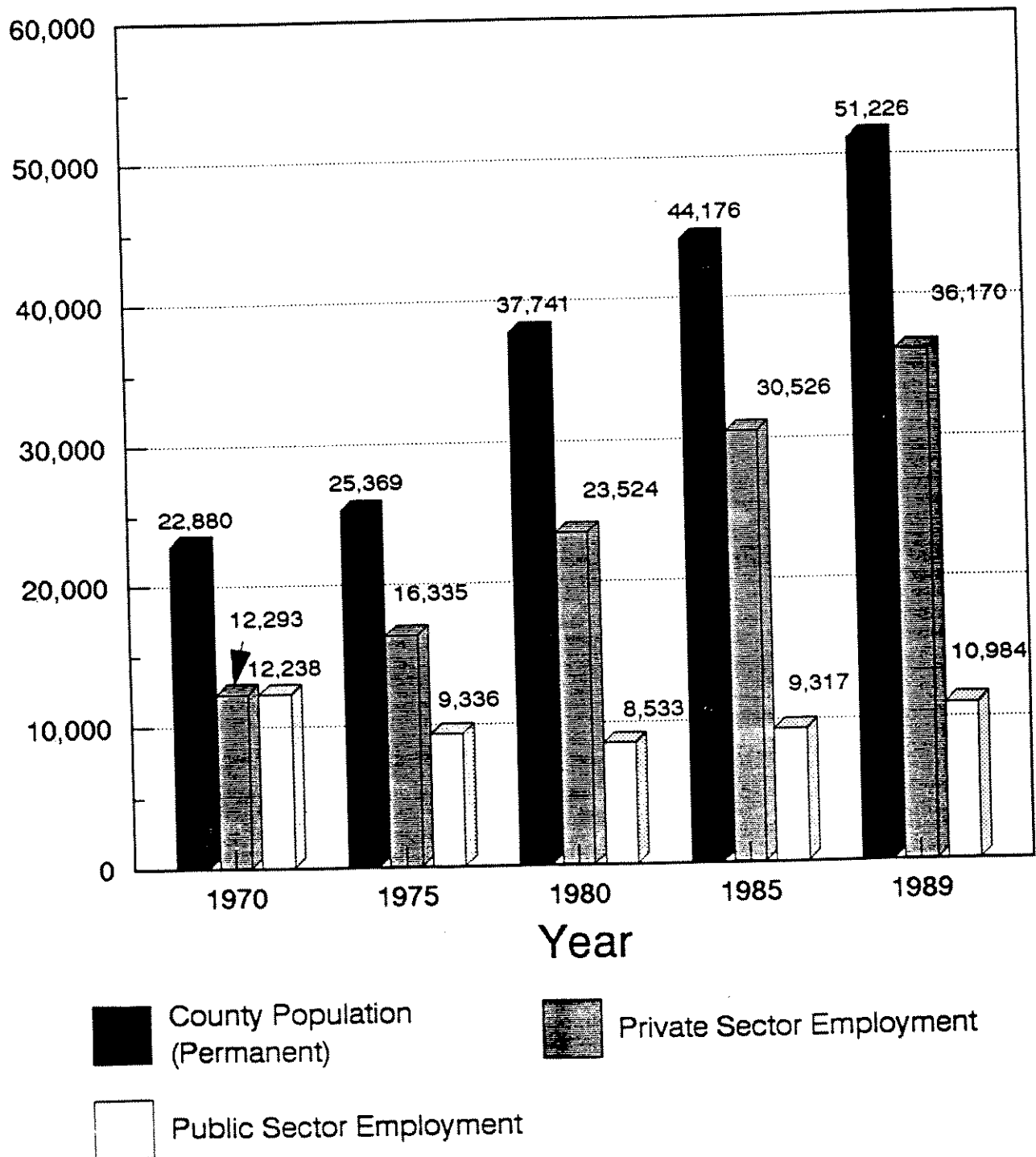
(4) Includes lodging places, personal, business, health, legal, private and social services.

(5) Includes all local offices of state agencies and local school, sheriff, government and service employees.

(6) Includes trucking and warehousing, water transportation and local utility employees.

Source: Bureau of Economic Analysis, U.S. Department of Commerce, 1991.

Figure 2.1
Population and Employment Trends



Note: Unincorporated area only.

Source: BEBR; Bureau of Economic Analysis, U.S. Department of Commerce; U.S. Census 1970, 1980.

fish markets, distributors, etc. The number of commercial vessels has declined approximately six percent from 1980 to 1990. The decline in the number of commercial vessels has been attributed to a combination of economic and natural resource factors, including:

- (a) the cyclical and migratory patterns and in some cases imposed quotas on the various types of commercial seafood resulting in a decline in poundage caught;
- (b) the high cost of living in the Key West/Stock Island area forcing commercial fishermen to seek cheaper areas to live, purchase supplies and outfit their rigs;
- (c) the increased dock fees as well as a reduction in dock space for commercial vessels, contributing to commercial vessels being based outside the area; and
- (d) the inevitable retirement of older fishermen, coupled with declines in the number of persons attracted to commercial fishing.

Together these factors are contributing to the overall decline in the number of registered commercial boats and corresponding poundage for Monroe County from 1980 to 1989.

Table 2.11
Monroe County Commercial Fishing (1980 - 1990)

Year	Number of Commercial Boats	Percent Change	Fish Value (millions)	Percent Change	Poundage (millions)	Percent Change
1980	3,768		\$33.7		23.3	
1981	2,801	-25.7%	46.6	38.3%	31.4	34.8%
1982	3,085	10.1%	39.8	-14.6%	24.8	-21.0%
1983	3,369	9.2%	32.3	-18.8%	20.4	-17.7%
1984	3,782	12.3%	40.9	26.6%	27.9	36.8%
1985	3,629	-4.0%	39.0	-4.6%	25.0	-10.4%
1986	3,881	6.9%	37.7	-3.3%	21.4	-14.4%
1987	3,870	-0.3%	36.3	-3.7%	15.0	-29.9%
1988	3,197	-17.4%	33.9	-6.6%	15.0	0%
1989	3,242	1.4%	51.8	52.8%	18.3	22.0%
1990	3,550	9.5%	39.8	-23.2%	15.7	-14.2%

Source: National Marine Fisheries Service, 1991.

B. Personal Income

Personal income represents another key economic indicator. Personal income includes income received by County residents from all sources, both private and government. It consists of wages, salaries and other earned income; dividends, interest and rent; and transfer payments. Transfer payments include private pensions, transfers from government funds (such as Social Security, military retirement pensions, Medicare and Medicaid), and direct government payments, such as unemployment, food stamps and aid to families with dependent children.

During the period from 1970 through 1989, total earnings by place of work in Monroe County increased by 450 percent. The largest increases in earned income were in the service, public utility and fishing industries. However, the aggregate wage figures reflect trends similar to identified employment trends together, retail trade and services account for the majority of earnings in Monroe County. The second largest wage generator is the government (all components). The majority of government earnings in the County go to military and state/local government employees.

In 1989, Monroe County wage earnings accounted for 52 percent of total personal income, while dividends, etc. and transfer payments accounted for 36 percent and 12 percent, respectively. This contrasts with national figures for the same year. Nationally, wages accounted for over 68 percent of total personal income, while dividends, etc. comprised 18 percent of the total, and transfers accounted for 15 percent. The fact that 48 percent of total personal income in Monroe County is derived from non-wage income, compared to 32 percent nationally, indicates that the retirement sector has a strong role in the local economy. The County's high proportion of dividend, interest and rent income reinforces the significance of retirees and also indicates a significant segment of the local population which is fairly affluent.

From 1980 through 1989, growth in per capita income of Monroe County permanent residents exceeded statewide and national increases. During the period from 1980 through 1989, per capita income of Monroe County residents increased at an average annual compound rate of over 8 percent. In 1980, per capita income in Monroe County was \$8,917 or nearly 9 percent below the state of Florida's per capita income of \$9,764 and 10 percent below per capita income nationwide (\$9,919). By 1989, per capita income in Monroe County climbed to \$17,986, exceeding state and national levels of \$17,715 and \$17,592, respectively.

2.1.8 Committed Development

Monroe County is required to provide adequate public facilities for existing and future development. Measures of existing development are used to calculate concurrency constraints and the reserve capacity which may exist for public facilities and services. Measures of existing development, however, do not include development for which development orders have or will be issued prior to plan adoption. This committed development is considered to be "in the pipeline" and will require a portion of the reserve capacity which may currently exist for public facilities and services in Monroe County.

The following sections describe the amount of committed development in Monroe County which may affect the provision of public facilities and services. This committed development will be added to the existing development in order to determine the carrying capacity over the planning horizon of this plan.

A. Committed Development in Unincorporated Monroe County Prior to Plan Adoption

For the purposes of this analysis, there are two types of development in Monroe County which will be used to determine total committed development: (1) *measured* development which has been permitted between April 1, 1990 (the date of the U.S. Census, which has been used as the source of existing population and development) and the preparation of the plan (October 21, 1991); and (2) development which can be *projected* to be permitted during the period between the preparation of the plan and plan adoption (October 16, 1992). These two types of permitted development are discussed below.

Permitted Development (April 1, 1990 to October 21, 1991)

Permitted development includes development which has met the Monroe County's concurrency test and has received a final development order. This includes building permits issued by the County and approved Developments of Regional Impact (DRI's). Development approval data has been compiled for the period from April 1, 1990 through October 21, 1991 (Table 2.12). April 1, 1990 was chosen as the start date for the data collection since it corresponds to the Census Day for which the existing population and development levels were measured. This measure is especially important for the calculation of hurricane clearance times, since the transportation model of the Lower Southeast Florida Hurricane Evacuation Study uses 1990 Census population and development data to calculate hurricane evacuation clearance times.

As indicated on Table 2.12, the amount of development that has been permitted, and for which the County must be prepared to provide services, includes 1,593 residential dwelling units and 225 hotel/motel rooms, for a total of 1,818 units. In addition, approximately 239,357 square feet of non-residential development has been permitted in the unincorporated areas of Monroe County.

Table 2.12 indicates that 838, or 52.6 percent, of the total of 1,593 residential units have been permitted for development in the Upper Keys; 281 residential units, or 17.6 percent of the total, have been permitted for development in the Middle Keys; and 474 residential units, or 29.8 percent, have been permitted for development in the Lower Keys. A comparison of the distribution of this committed development with the existing (1990) population distribution (34.7 percent in the Upper Keys, 26.8 percent in the Middle Keys, and 38.5 percent in the Lower Keys), indicates that development pressure has shifted toward the Upper Keys and away from the Middle and Lower Keys.

Hotel/motel development accounts for 225 permitted units. Consistent with the pattern of recent residential development approvals, 173 units, or 77 percent, have been permitted for development in the Upper Keys, and 52 units, or 23 percent, have been permitted for development in the Middle Keys. There has been no hotel/motel development permitted in the Lower Keys during this period.

For non-residential development, the distribution of permitted development also follows these general trends, with a total of 149,298 square feet, or 62.4 percent, permitted for development in the Upper Keys; 22,674 square feet, or 9.5 percent, permitted for development in the Middle Keys; and 67,385 square feet, or 28.2 percent, permitted for development in the Lower Keys.

Permitted Development (October 21, 1991 to October 16, 1992)

In addition to the development which has been permitted during the period between April 1, 1990 and October 21, 1991, an additional amount of development can be expected to be permitted during the period between October 21, 1991 and plan adoption (October 16, 1992). The amount and distribution

of this committed development has been projected based upon the recent trends in development approvals described above.

Based upon the development approval trend during the period between April 1, 1990 and October 21, 1991, an additional 1,019 residential units can be expected to be permitted prior to plan adoption (Table 2.13). This has been calculated by determining the number of units permitted monthly over the past 18.75 months (between April 1, 1990 and October 21, 1991). This monthly amount, or 85 units, was then projected over the 12 month period between October 21, 1991 and October 16, 1992, for a total of 1,019 units.

Using the same methodology, approximately 144 hotel/motel units are projected to be permitted during this period, for a total of 1,163 units (Table 2.13). Approximately 153,000 square feet of non-residential development are projected to be permitted during this same period (Table 2.14).

Total Permitted Development Prior to Plan Adoption

As described above, a total of 1,593 residential units have been permitted between April 1, 1990 and October 21, 1991, and an additional 1,019 units are projected to be permitted between October 21, 1991 and plan adoption, for a total of 2,612 residential units prior to plan adoption. In addition, approximately 369 hotel/motel units can be expected to be permitted prior to plan adoption, for a total of 2,981 units.

Total Committed Development Prior to Plan Adoption

Based upon recent experience, approximately 70 percent of the residential and hotel/motel development permits are expected to result in a completed unit. This phenomenon may be exacerbated by the "rush" to secure permits prior to adoption of the plan and new regulations, with lessened regard to underlying market demand. Applying this percentage to the 2,981 units projected to be permitted prior to plan adoption yields an estimated 2,087 completed units. This committed development should be considered to require some portion of the reserve capacity for each public facility and service in order to determine the carrying capacity over the planning horizon.

A total of 392,545 square feet of non-residential development is expected to be permitted prior to plan adoption. It has been assumed that all of this non-residential development will be completed and Monroe County will be required to provide adequate public facilities and services for this development.

B. Committed Development in Incorporated Cities

Committed development for the cities of Layton, Key Colony Beach and Key West has not been included in this analysis because of an absence of comparable, reliable data. Committed development data (i.e., building permit data and development in approved DRI's) that was used for the measure of committed development for the unincorporated portion of Monroe County was not available for the cities of Layton, Key Colony Beach, and Key West (Solin and Associates, 1991; Turney, 1990; and Swarthout, 1990).

Although measures of committed development for the incorporated cities have not been included in this analysis, the impacts of any committed development on the County from these jurisdictions will eventually be accounted for in future measures of "background" development. In other words, the extent to which any committed development in the incorporated cities results in a built unit which

Table 2.12
Permitted Development by Key
Unincorporated Monroe County (4/1/90-10/21/91)

Key	Single-Family (units)	Mobile Homes (units)	Multi-Family (units)	Subtotal Residential (units)	Hotel/Motel (units)	Total (units)	Retail/Office (SF)	Hvy. Comm./Storage (SF)	Inst. (SF)	Total Non-Res. (SF)
Cross Key	2			2		2				
North Key Largo	34			34		34				
Key Largo	265	11	291	567	173	740	70,600	17,486	31,261	119,347
Plantation	162		73	235		235	24,911		5,040	29,951
Windley Key										
Subtotal - Upper Keys	463	11	364	838	173	1,011	95,511	17,486	36,301	149,298
Upper Matecumbe	23			23		23				
Lower Matecumbe	77		11	88	40	128	2,480			2,480
Craig Key										
Fiesta Key										
Long Key	1		15	16	12	28				
Conch Key	7		86	93		93				
Grassy Key	10			10		10				
Fat Deer Key	7			7		7				
Marathon	43		1	44		44	5,820	6,350	8,024	20,194
Knights Key										
Subtotal - Middle Keys	168	0	113	281	52	333	8,300	6,350	8,024	22,674
L. Duck/Missouri/Ohio										
Bahia Honda										
W. Summerland	2			2		2				
No Name Key										
Big Pine Key	165			165		165	7,728	10,000	1,640	19,368
Little Torch Key	23			23		23				
Middle Torch Key	37			37		37				
Big Torch Key										
Ramrod Key	52			52		52	1,080	8,960		10,040
Summerland Key	44			44		44	3,000			3,000
Cudjoe Key	70			70		70			1,800	1,800
Upper Sugarloaf Key	4			4		4				
Lower Sugarloaf Key	27			27		27				
Saddlebunch Key	9			9		9				
Shark Key	8			8		8				
Big Coppitt		1		1		1		1,150		1,150
Geiger Key										
Boca Chica/E. Rockland	21			21		21		14,472		14,472
Key Haven	1			1		1				
Stock Island	10			10		10		17,555		17,555
Subtotal - Lower Keys	473	1	0	474	0	474	11,808	52,137	3,440	67,385
Total	1,104	12	477	1,593	225	1,818	115,619	75,973	47,765	239,357

Source: Monroe County Growth Management Division, October 1991.

Table 2.13

**Committed Residential and Hotel/Motel Development Prior to Plan Adoption
Unincorporated Monroe County (4/1/90-10/16/92)**

	Upper Keys	Middle Keys	Lower Keys	Total
Development Permitted Between 4/1/90-10/21/91 (1)				
Single-Family	463	168	473	1,104
Mobile Homes	11	0	1	12
Multi-Family	364	113	0	477
Subtotal - Residential	838	281	474	1,593
Hotel/Motel	173	52	0	225
Total (Units)	1,011	333	474	1,818
Development Projected to be Permitted Between 10/21/91-10/16/92 (2)				
Single-Family	296	107	303	706
Mobile Homes	7	0	1	8
Multi-Family	233	72	0	305
Subtotal - Residential	536	180	303	1,019
Hotel/Motel	111	33	0	144
Total (Units)	647	213	303	1,163
Total Permitted Development (4/1/90-10/16/92)				
Single-Family	759	275	776	1,810
Mobile Homes	18	0	2	20
Multi-Family	597	185	0	782
Subtotal - Residential	1,374	461	777	2,612
Hotel/Motel	284	85	0	369
Total (Units)	1,658	546	777	2,981
Total Committed Development (4/1/91-10/16/92) (3)				
Single-Family	532	193	543	1,267
Mobile Homes	13	0	1	14
Multi-Family	418	130	0	548
Subtotal - Residential	962	323	544	1,829
Hotel/Motel	199	60	0	258
Total (Units)	1,161	382	544	2,087

(1) Actual number of residential units permitted between 4/1/90 and 10/21/91.

(2) Number of residential units projected to be permitted between 10/21/91 and 10/16/92 based on the trend during the 4/1/90 through 10/21/91 period.

(3) Approximately 70% of units permitted between 4/1/90 and 10/16/92 are expected to result in a completed unit.

Source: Monroe County Growth Management Division, October 1991.

Table 2.14

**Committed Non-Residential Development Prior to Plan Adoption
Unincorporated Monroe County (4/1/90-10/16/92)**

	Upper Keys	Middle Keys	Lower Keys	Total
Permitted Non-Residential Development (4/1/90-10/21/91) (1)				
Retail/Office	95,511	8,300	11,808	115,619
Heavy Commercial/Storage	17,486	6,350	52,137	75,973
Institutional	36,301	8,024	3,440	47,765
Total (SF)	149,298	22,674	67,385	239,357
Permitted Non-Residential Development (10/21/91-10/16/92) (2)				
Retail/Office	61,127	5,312	7,557	73,996
Heavy Commercial/Storage	11,191	4,064	33,368	48,623
Institutional	23,233	5,135	2,202	30,570
Total (SF)	95,551	14,511	43,126	153,188
Total Committed Non-Residential Development (4/1/90-10/16/92)				
Retail/Office	156,638	13,612	19,365	189,615
Heavy Commercial/Storage	28,677	10,414	85,505	124,596
Institutional	59,534	13,159	5,642	78,335
Total (SF)	244,849	37,185	110,511	392,545

(1) Actual amount of non-residential square footage permitted between 4/1/90 and 10/21/91.

(2) Amount of non-residential square footage projected to be permitted between 10/21/91 and 10/16/92 based on the trend during the 4/1/90 through 10/21/91 period.

Source: Monroe County Growth Management Division, October 1991.

affects the provision of public facilities and services by Monroe County (i.e., traffic circulation, hurricane evacuation) will be accounted for in the yearly evaluation of adequate public facilities and services contained in the Concurrency Management Report.

2.1.9 Availability of Facilities and Services to Serve Existing Land Uses

A. Roads

The primary roadway facility in Monroe County is US 1, which extends the length of the Keys, or approximately 112.5 miles, between Key West and the Dade County line. US 1 is maintained by the Florida Department of Transportation (FDOT). The Monroe County Division of Public Works is responsible for maintaining the remainder of the public road network in unincorporated Monroe County. FDOT has classified 41 roadways in the unincorporated County as County Collector Roads.

The Traffic Circulation Element establishes separate level of service standards for US 1 and the remainder of the roads in Monroe County. US 1 is divided into 24 separate segments for the purpose of roadway capacity analysis. The majority of the US 1 segments and county roads are operating at or above the level of service standards, with overall capacity sufficient to serve existing and committed development plus an additional 5,738 residential units. Four segments of US 1 (Big Pine, Lower Matecumbe, Upper Matecumbe, and Plantation Key) have no remaining reserve capacity and will experience levels of service below the established standard for US 1 as a result of existing and committed development. A combination of Transportation Systems Management (TSM) techniques, roadway widenings, and/or speed limit adjustments will be necessary to mitigate these localized facility inadequacies.

A more detailed discussion of Monroe County's road system is contained in Chapter 4.0 (Traffic Circulation Element).

B. Potable Water

Potable water is provided to Monroe County by the Florida Keys Aqueduct Authority (FKAA). The primary raw water source for the FKAA's system is the Florida City Wellfield, which withdraws water from the Biscayne Aquifer in southeast Dade County. The FKAA distributes water from a treatment plant at the wellfield to Monroe County through a 130-mile long transmission main running the length of US 1. This transmission main is connected to a series of storage and pumping facilities and a separate network of distribution lines. Withdrawals from the Biscayne Aquifer are regulated by the South Florida Water Management District (SFWMD) through the issuance of Consumptive Use Permits.

The FKAA's current Consumptive Use Permit, which expires in 1995, permits an annual withdrawal of 5.56 billion gallons, which is well in excess of the 1990 Monroe County consumption of 4.404 billion gallons. At the level of service standards established in the Potable Water Element, the water supply allowed by the permit is sufficient to serve existing land uses and committed development plus an additional magnitude of development of approximately 18,258 equivalent residential units (ERU's) in unincorporated and incorporated Monroe County.

A more detailed discussion of potable water facilities and service in Monroe County is contained in Chapter 8.0 (Potable Water Element).

C. Solid Waste

Monroe County's solid waste facilities are managed by the Division of Environmental Management (DEM). Solid waste disposal in Monroe County is currently provided through a contract between the County and Waste Management Inc. (WMI). Under this contract, solid waste collected by franchise and transported to three transfer facilities located on Cudjoe Key, Long Key, and Key Largo is hauled out of the County by WMI to sanitary landfill/resource recovery facilities in unincorporated Broward County. DEM manages a recycling program designed to separate recyclable materials from the solid waste stream to the maximum extent possible.

The level of service standards established in the Solid Waste Element establish a yearly limit of 95,000 tons of solid waste per year generated for disposal by Monroe County based upon the current haul out contract. DEM's projections for 1991-1992 indicate that 77,650 tons of solid waste generated by existing land uses in unincorporated and incorporated Monroe County except for the City of Key West will be processed for haul out. At the level of service standards established in the Solid Waste Element, there is sufficient capacity to serve existing land uses and committed development plus an additional magnitude of development of approximately 3,711 ERU's (Equivalent Residential Unit) in unincorporated Monroe County and the municipalities of Key Colony Beach and Layton.

A more detailed discussion of solid waste facilities and service in Monroe County is contained in Chapter 9.0 (Solid Waste Element).

D. Sanitary Sewer

There is no public sanitary sewer service in unincorporated Monroe County. Existing land uses are served by privately owned and maintained on-site disposal systems (OSDS), which include septic tank systems and cesspools, and package treatment plants. Concerns have increased in recent years regarding the impact of wastewater disposal systems serving existing land uses and new development on the nearshore waters of the Florida Keys. A combined Sanitary Wastewater/Stormwater Management Master Plan (SW/SMMP) will be developed which will evaluate the impacts of existing wastewater disposal practices on nearshore water quality and identify new level of service standards based on environmental carrying capacity which will be adopted to mitigate the impacts of existing and new development.

A more detailed discussion of existing wastewater disposal facilities and the proposed SW/SMMP is contained in Chapter 10.0 (Sanitary Sewer Element).

E. Drainage

Because of the low-lying topography, highly permeable soil conditions, proximity to the ocean and other receiving waters, and rural character of most of the county road network, most of the existing land uses in Monroe County are not served by stormwater management facilities. Certain projects have been granted surface water management permits by the South Florida Water Management District (SFWMD) as provided by Florida statute. Public stormwater management facilities include storm sewers and retention basins installed by the Florida Department of Transportation (FDOT) along

portions of US 1. Monroe County has installed limited stormwater facilities including swales, injection wells, and curb and gutter systems on county roads in some developed areas and to address localized flooding problems.

Stormwater runoff from private land uses largely drains to a network of canals, access ways, and roadside ditches. The SW/SMMP will inventory existing drainage facilities and will identify water quantity and quality deficiencies which should be corrected through retrofitting. The plan will evaluate potential use of a Stormwater Utility to fund the development of a public stormwater management system and will identify projects required to correct existing deficiencies.

A more detailed discussion of existing stormwater management facilities and the proposed Stormwater Management Plan which will be a part of the SW/SMMP is contained in Chapter 11.0 (Drainage Element).

F. Natural Groundwater Aquifer Recharge

As previously noted, Monroe's County potable water supply is derived from the Florida City Wellfield in Dade County. Groundwater aquifers within the Keys are not used for potable water supply purposes. Limited withdrawals for irrigation and domestic household use are made by private wells from freshwater lenses occurring on some of the larger keys, including Big Pine Key.

A more detailed discussion of natural aquifer groundwater recharge is contained in Chapter 12.0 (Natural Groundwater Aquifer Recharge Element).

G. Parks and Recreation

Publicly-owned conservation and recreation lands in Monroe County include lands owned by the federal government, state of Florida, Monroe County, the Cities of Key West and Key Colony Beach, and the Monroe County School Board (see Chapter 13.0, Recreation and Open Space Element). Monroe County currently owns or leases activity-based recreational areas, which are developed with active recreational facilities not dependent upon the presence of a specific natural resource, and resource-based recreational areas, which are used for activities such as boating, fishing, and hiking which are dependent upon the presence of natural resources. Additional activity-based and resource-based recreational land is owned by the Monroe County School Board.

Based on the level of service standards established in the Recreation and Open Space Element, Monroe County currently has a deficit of 10.5 acres of activity-based recreational land available to serve existing and committed development. Sufficient resource-based recreational land is available to serve existing land uses, committed development, and future growth through the year 2002.

A more complete discussion of recreational facilities in Monroe County is contained in Chapter 13.0 (Recreation and Open Space Element).

H. Educational Facilities

Background

Monroe County faces a series of challenges in providing educational facilities that meet all of the community needs. These challenges include the following factors:

- (a) a limited number of suitable sites are available for schools;
- (b) school-commuting distances are a limiting factor for school development in the Keys, where most of the population is distributed in a dispersed linear manner; and
- (c) the comprehensive plan has limited flexibility in terms of balancing educational facility land requirements with other public interests, such as environmental protection.

Chapter 163, 1998 Growth Management Legislative Amendment states:

[As of July 1, 1998 local governments are to include in their comprehensive plans]

"Criteria to locate schools proximate to urban residential areas [and] criteria to collocate schools with other public facilities."

Section 163.3177 (6) (a), Florida Statutes states:

"The future land use element must clearly identify the land use categories in which schools are an allowable use. When delineating the land use categories in which public schools are an allowable use, a local government shall include in the categories sufficient land proximate to residential development to meet with the projected needs for schools in coordination with public school Boards and may establish differing criteria for schools of different types or size. Each local government shall include lands contiguous to existing school sites, to the maximum extent possible, within the land use categories in which public schools are an allowable use."

Monroe County is well positioned to address the above mentioned challenges. Firstly, the public schools in the County still have reserve capacity to accept more students in grades 6-12 (see Table 2.14.1). Secondly, growth rates in the County's student age population have been modest over the past few years. Furthermore, current ROGO restrictions on development make it unlikely that this population will increase beyond the current capacity of the schools (see Table 2.14.2). Finally, strengthening the relationship between Monroe County and the School Board will assist the County in taking a proactive approach to balancing the County's school land requirements with other planning initiatives.

Table 2.14.1

Capacity of Public Schools in Monroe County: 1998

Level	Student Capacity	Utilization
Elementary K-5	842	100%
Middle 6-8	995	90%
High 9-12	1,806	95%

Source: REC Educational Consultants, Educational Plan Survey Monroe Public Schools April 13-17, Monroe County School Board, 1998, pp. 17-33.

Table 2.14.2

Change in Public School Attendance in Monroe County: 1990-2002

Year	K-5	6-8	9-12	Overall (K-12)
Change from 1990-91	25	- 101	69	- 7
% Change from 1990-91	0.55%	- 4.61%	2.73%	- 0.08%
1997-1998	4,560	2,092	2,599	9,251
2001-2002	4,535	2,193	2,530	9,258
Projected % Change from 1997-2002	- 0.005%	0.048%	- 0.027%	- 0.900%

Source: REC Educational Consultants, Educational Plan Survey Monroe Public Schools April 13-17, Monroe County School Board, 1998, pp. 39.

Data and Analysis

Acreeage and Zoning of Public School Sites in Monroe County

There are currently seven public schools in unincorporated Monroe County and the incorporated Villages of Islamorada.

The acreage and zoning of these schools are as follows:

- (a) Key Largo School (PK-8), 29.09 acres, 13.25 acres of which are developed, zoned Sub Urban Commercial (SC) and Sub Urban Residential (SR);
- (b) Plantation Key School (PK-8), 8.29 acres, all of which are developed, zoned Suburban Residential (SR);
- (c) Coral Shores High School (9-12), 20.13 acres, all of which will soon be developed Suburban Residential (SR);
- (d) Stanley Switlik Elementary (PK-6), 12.03 acres, 9.43 are developed, zoned Suburban Commercial (SC);
- (e) Marathon High & Middle School (6-12), 14.12 acres, all of which are developed, zone Suburban Residential (SR);
- (f) Big Pine Neighborhood Elementary (PK-2), 4.5 acres, all of which are developed, zone Suburban Commercial (SC);
- (g) Sugarloaf School (PK-8), 37.87 acres, 24 acres of which are developed, zoned Suburban Commercial (SC), Suburban Residential (SR) and Native Area (NA).

Vacant Land in Close Proximity to the Land Holdings of Monroe County's School Board

There are extensive areas of vacant land in close proximity to public schools in Monroe, much of which are currently zoned in categories that permit building schools and other public facilities. The following section outlines the availability of land in close proximity to Monroe County's schools:

- (a) Key Largo School: There are approximately 70 acres of adjacent vacant land zoned Suburban Residential (SR) and 65 acres zoned Native Area (NA) surrounding the site. Current environmental regulations limit the School Board from expanding in this area.
- (b) Plantation Key School: There is no adjacent vacant land onto which the school could expand. There are approximately 1.28 acres of vacant lots zoned Native Area (NA) and 1 acre zoned Suburban Residential (SR) that are separated from the school site by a large lot zoned Suburban Residential (SR).
- (c) Coral Shores High School: There are approximately 3 acres of vacant land zoned Improved Subdivision (IS) adjacent to the current site onto which the school could expand if the property was rezoned.
- (d) Stanley Switlik Elementary: The School Board has arranged with the Department of Transportation to transfer land holdings of 3.6 acres of adjacent land zoned Suburban Commercial (SC). The School Board also purchased 1.5 acres of adjacent land zoned Suburban Commercial (SC) earlier this year.
- (e) Marathon High & Middle School: There are approximately 21 acres of vacant land zoned Native Area (NA) adjacent to the school site. However, the developmental capabilities of this land is unlikely due to environmental considerations.
- (f) Big Pine Neighborhood Elementary: There are approximately 4.27 acres of vacant land zoned Suburban Commercial (SC) adjacent to the current school site. There are also approximately 8.6 acres of vacant buildable land zoned Improved Subdivision (IS) in close proximity to the school.
- (g) Sugarloaf School: There are approximately 27 acres of vacant land zoned Native Area (NA), 34 acres zoned Suburban Residential (SR) and less than half an acre of Suburban Commercial (SC) surrounding the current site. Most of the land adjacent to the school site is saltmarsh and buttonwood area, making them unlikely sites for expansion.

Current Land Requirements of Monroe County's School Board

Overall, the County has sufficient vacant and appropriately zoned land to meet the area's current and future school siting needs. The specific land requirements for the public schools in the County are discussed below (see Table 2.14.3):

- (a) Key Largo School: Meeting the substantial land requirements of Key Largo School is a top priority of the School Board. The Department of Education (DOE) has instructed the Monroe County School Board to construct an additional 37,375 square feet of school space. However, current land use regulations prohibit the School Board from constructing any additional facilities on or adjacent to its current site due to the environmental sensitivity of the area. The School Board recently made an unsuccessful attempt to purchase a new site on which to build the

required school facilities. Unless the Board is able to provide these facilities in Key Largo they will be non-compliant with the minimum DOE standards. Fully utilizing the current Key Largo site would enable the School Board to meet their DOE requirements and to minimize other secondary environmental impacts associated with the construction of a new school. The environmental costs of expanding into environmentally sensitive land might prove to be less than those costs associated with building on a new site, such as constructing new roads and septic systems.

- (b) **Plantation Key School:** The DOE has instructed the Monroe County School Board to construct an additional 54,810 square feet of school space for this school. The parcel of land for this school is not large enough to accommodate this development and regulations prohibit the School Board from constructing any additional facilities on, or adjacent to its current site due to the environmentally sensitive nature of the area. The new incorporated Villages of Islamorada will address plans for Plantation Key School and other educational facilities in its comprehensive plan.
- (c) **Coral Shores High School:** The current site for Coral Shores High School is not large enough to accommodate all of the school's requirements. The School Board intends to tear down the existing facilities at the site, acquire some additional land and build a new larger school. Coral Shores High School is currently not in compliance with federal legislation (Title 9) which requires equitable recreation facilities for females and males at public schools. The School Board is working with the Villages of Islamorada to cooperatively develop recreational and physical education facilities off of the Coral Shores High School site to rectify this situation. The primary property being investigated is the Plantation Key Yacht Harbor property. The new Villages of Islamorada will address plans for Coral Shores High School and other educational facilities in its comprehensive plan.
- (d) **Stanley Switlik Elementary:** Expanding the existing school facilities into the two parcels of land flanking the current site will accommodate the land requirements for Stanley Switlik Elementary. These parcels already have structures on them, which may be removed prior to the construction of new and expanded facilities for the school.
- (e) **Marathon High & Middle School:** The land requirements for Marathon High and Middle School are currently being met. The School Board would like to build a new 13,000 square foot auditorium off site for this school that could also serve as a community center.
- (f) **Big Pine Neighborhood Elementary:** Deciding to develop a small school on Big Pine was a controversial and prolonged process. The main issue was how to balance the educational needs of Big Pine residents with the environmental impacts of the proposed developments on an endangered species: the Key deer. A compromise was reached in which the School Board, DCA and Monroe County agreed that only a small satellite campus with a maximum capacity of 200 students could be built on Big Pine. Establishing a small campus on Big Pine, instead of a full scale, regional elementary school was seen to strike 'a reasonable balance between protection of the Key deer and provision of adequate public educational facilities.' The current developed portion of the Big Pine Neighborhood Elementary occupies 4.5 acres. Further development of this site is prohibited by a settlement agreement between the School Board and the DCA.

- (g) Sugarloaf School: Sugarloaf School is expanding to accommodate the educational needs of students in the Lower Keys. The DCA is assisting the School Board in developing a regional educational and recreational facilities at the Sugarloaf site. The land requirements for Sugarloaf School are to be accommodated by a new middle school that is being constructed on property adjoining the original school site. The new school is being developed on land that is currently zoned NA, SC and SR. Allowing Sugarloaf School to expand into NA lands is part of the compromise decision to limit school size on Big Pine. The environmental impacts of constructing a full-size, regional elementary school on Big Pine were seen to be greater than those caused by encroaching on NA lands in Sugarloaf. The main concern on Big Pine was that a regional elementary school would generate more traffic on Big Pine, which could cause more wildlife-vehicle accidents involving Key deer.

Future Land Requirements of Monroe County's School Board

The analysis of population growth trends in the County and the area currently used and potentially available for school development shows that Monroe County currently meets and will continue to meet its school land requirements.

Table 2.14.3
Preliminary Public School Land Needs Assessment

Schools	Developed Site (acres and zoning)	Land Needed 2003 (estimate)		Potential sites (acres/zoning)
Key Largo School	13.25 acres (SC & SR)	¹ 0.86 acre	0 acres	There are approximately 70 acres of vacant land zoned SR and 65 acres zoned NA surrounding the current site.
Plantation Key School	8.29 acres (SR)	² N/A	N/A	N/A
Coral Shores High School	20.13 acres (SR)	N/A	N/A	N/A
Stanley Switlik Elementary	9.43 acres (SC)	³ 5.4 acres	0 acres	There are approximately 5.1 acres of vacant land zoned SC surrounding the current site.
Marathon High & Middle School	14.12 acres (SR)	⁴ 0.30 acres	0 acres	There are approximately 21 acres of vacant land zoned NA surrounding the current site.
Big Pine Neighborhood Elementary	4.5 acres (SC)	0 acres	0 acres	There are approximately 4.27 acres of vacant land zoned SC and 8.6 acres zoned IS surrounding the current site.
Sugarloaf School	24 acres (SC & NA)	0 acres	0 acres	There are approximately 27 acres of vacant land zoned NA and 34 acres zoned SR surrounding the current site.
¹ The School Board is working with the Monroe County Planning Department to meet this need prior to 2003. ² The new Villages of Islamorada will address plans for Plantation Key School, Coral Shores High School and other educational facilities in their comprehensive plan. ³ The School Board purchased two lots zoned SC adjacent to the current school site onto which it will expand in 1998. ⁴ The School Board wants to partner with the County to create an auditorium that also serves as a community center.				

Source: July 7, 1998, meeting between Monroe County Planning Department and School Board Representatives and subsequent discussions.

2.2 Existing and Projected Population

The analyses presented in this section distinguish unincorporated Monroe County from the incorporated areas within the County where possible, based on available source data. In accordance with the statutory guidelines for local comprehensive planning in Florida, the best available data has been identified and used in all analyses.

2.2.1 Historical Population Trends

Monroe County's uneven historic growth rate is reflective of the national and state trends and the effect of the local military installation activity in the County. Resident population trends over the last fifty years are presented in Table 2.15. The County's resident population increased approximately 113 percent in the period between 1940 and 1950, adding an average of 1,588 residents per year, growing from 14,078 in 1940 to 29,957 in 1950. The period from 1950 to 1960 added an average of 1,796 residents per year, resulting in a County population of 47,921. In a twenty year period, Monroe County added over 33,800 residents to the population. To date, the slowest period of growth occurred during the period between 1960 and 1970, with an average of 467 residents added to the County population per year. The resident population for 1970 was 52,586. For the ten year period between 1970 and 1980, Monroe County's population experienced another rapid period of growth, adding approximately 1,060 residents per year and boosting the County population to 63,188 by 1980. From 1980 to 1990 Monroe County population grew at approximately 1,484 residents per year to a total of 78,024 residents as of the 1990 Census. The compound annual average growth rate for the fifty year population history of Monroe County is approximately 3.5 percent.

A significant shift of the population over this time frame from the incorporated areas to the unincorporated areas of the County is notable. Prior to 1980, the majority of the population resided in the incorporated areas of Monroe County, primarily the City of Key West. An increase in housing options occurring in the 1970s and the reductions in military personnel based in Key West contributed to the shift in population centers. By 1980, Incorporated Monroe County (Key West, Key Colony Beach and Layton's collective population), represented approximately 40 percent of the total County population, decreasing to approximately 33 percent by 1990. Table 2.15 illustrates the historic resident population trends in the incorporated and unincorporated areas of Monroe County.

Household size is a key population characteristic. The average household size in Monroe County has been following the national trend toward fewer persons per household. The same factors that have shaped the national trends toward smaller household size, namely declining birth rates, increasing divorce rates, the increasing number of "empty nesters" maintaining households, the large number of young adults forming one- and two-person households, may have affected Monroe County's household size in addition to the in-migration of older people. The average household size in Monroe County declined from 3.10 persons per household in 1960 to 2.34 in 1980. The 1990 Census indicates the Monroe County household size to be 2.24 persons per household.

From 1970 to 1980, the number of households in Monroe County increased from 16,827 to 26,340, an annual average increase of 951 households per year. From 1980 to 1990, the number of households increased 30 percent to 33,583, an average annual increase of 724 households.

Table 2.15
Historic Resident Population Trends
Monroe County Incorporated and Unincorporated Areas
1940 - 1990

Year	Population	Population Change	Average Annual Change	Compound Annual Rate of Change (%)	Percent of County Total (%)
Unincorporated Monroe County					
1940	1,151				8.2
1950	3,524	2,373	237	11.8	11.8
1960	13,965	10,441	1,044	14.8	29.1
1970	24,552	10,587	1,059	5.8	46.7
1980	37,741	13,189	1,319	4.4	59.7
1990	52,032	14,291	1,429	3.3	66.7
Incorporated Areas of Monroe County					
1940	12,927				91.8
1950	26,433	13,506	1,351	7.4	88.2
1960	33,956	7,523	752	2.5	70.9
1970	28,034	(5,922)	(592)	-1.9	53.3
1980	25,447	(2,587)	(259)	-1.0	40.3
1990	25,992	545	55	0.2	33.3
Monroe County					
1940	14,078				100.0
1950	29,957	15,879	1,588	7.8	100.0
1960	47,921	17,964	1,796	4.8	100.0
1970	52,586	4,665	467	0.9	100.0
1980	63,188	10,602	1,060	1.9	100.0
1990	78,024	14,836	1,484	2.1	100.0

Source: U. S. Department of Commerce, Bureau of Census; Florida Statistical Abstract; PriceWaterhouse.

2.2.2 Existing (1990) Population

Chapter 9J-5 of the Florida Administrative Code directs that the "comprehensive plan shall be based on resident and seasonal population estimates and projections." According to the definition established by 9J-5, resident population refers to "inhabitants counted in the U.S. Bureau of the Census in the total population category." Seasonal population encompasses those "inhabitants who utilize, or may be expected to utilize, public facilities or services, but who are not residents. Seasonal population shall

include tourists, migrant farm workers, and other short-term and long-term visitors." The methodologies used to develop both resident and seasonal population for Monroe County are described in detail below.

A. Resident Population

Population

Table 2.15 shows historic resident population figures for Monroe County. The total Monroe County population for 1990 as reported by the Census Bureau is 78,024 with 52,032 located in the unincorporated area. Population in the incorporated areas of Key West, Layton and Key Colony Beach for 1990 totals 25,992 or 33 percent of the County population.

Households

According to the 1990 U. S. Census, there are a total of 33,583 resident (permanent) households in Monroe County. The number of households in unincorporated Monroe County totals 22,564 according to the 1990 Census with the remaining 11,019 households in the incorporated areas (Key West, Key Colony Beach and Layton).

Demographic Profile

Sex

The male population outnumbers the female population in Monroe County as illustrated in Table 2.16.

Race

The composition of Monroe County's population by race is shown in Table 2.17. Non-white population in unincorporated Monroe County amounts to just over 5 percent compared to over 13 percent in the incorporated areas (principally Key West).

County-wide, approximately 12.3 percent of the population (all races) is of hispanic origin. In unincorporated Monroe County, population of hispanic origin amounts to approximately 10.5 percent of the total population compared to nearly 16 percent in the incorporated areas.

Age

The working age population (25 to 64 years of age) accounts for approximately 59 percent of total population in Monroe County as illustrated in Table 2.18. Statewide, this age group represents about 50 percent of the total. The percentages of younger and older persons in Monroe County are below statewide averages.

Unincorporated Monroe County has a significantly higher percentage of retirement aged population (17.6 percent age 65 and over) than that indicated for the incorporated areas. It is noted that the incorporated area statistics are dominated by Key West and that Key Colony Beach and Layton both contain substantially higher percentages of retirement age population than the County as a whole.

Table 2.16

Distribution of Population by Sex

Monroe County Unincorporated and Incorporated Areas (1990)

	Unincorporated Area		Incorporated Area		Total	
	Number	Percent	Number	Percent	Number	Percent
Male	27, 158	52.5%	13,818	53.2%	40,976	52.5%
Female	24,874	47.8%	12,174	48.8%	37,048	47.5%
Total	52,032	100.0%	25,992	100.0%	78,024	100.0%

Source: U.S. Census 1990

Table 2.17

Distribution of Population by Race

Monroe County Unincorporated and Incorporated Areas (1990)

	Unincorporated Area		Incorporated Area		Total	
	Number	Percent	Number	Percent	Number	Percent
White	49,320	94.8%	22,520	86.7%	71,840	92.1%%
Black	1,622	3.1%	2,581	9.9%	4,203	5.4%
Other	1,090	2.1%	891	3.4%	1,981	2.5%
Total	52,032	100.0%	25,992	100.0%	78,024	100.0%

Source: U.S. Census 1990

Table 2.18
Distribution of Monroe County Population by Age
Unincorporated and Incorporated Areas (1990)

<u>Age Category</u>	<u>Unincorporated</u>		<u>Incorporated</u>		<u>Total</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Under 5	2,656	5.1%	1,816	7.0%	4,472	5.7%
5 to 17	5,870	11.3	3,213	12.4	9,083	11.6
18 to 20	1,412	2.7	819	3.2	2,231	2.9
21 to 24	2,149	4.1	1,688	6.5	3,837	4.9
25 to 44	16,854	32.4	10,508	40.4	27,362	35.1
45 to 54	6,887	13.3	2,515	9.7	9,402	12.1
55 to 59	3,267	6.3	1,010	3.9	4,277	5.5
60 to 64	3,760	7.2	1,144	4.4	4,904	6.3
65 to 74	6,258	12.0	1,960	7.5	8,218	10.5
75 to 84	2,492	4.8	1,052	4.0	3,544	4.5
85 and over	<u>427</u>	<u>.8</u>	<u>267</u>	<u>1.0</u>	<u>694</u>	<u>.9</u>
Total	<u>52,032</u>	<u>100.0%</u>	<u>25,992</u>	<u>100.0%</u>	<u>78,024</u>	<u>100.0%</u>

Source: U.S. Census, 1990.

B. Seasonal Population

Due to Monroe County's popularity as a tourist destination, seasonal population has a significant impact on local facilities and services. Estimates of seasonal population were developed by analyzing four separate categories of seasonal population which impact Monroe County resources. These categories are:

- (a) population in seasonal households;
- (b) population in tourist facilities;
- (c) population in live-aboard vessels; and
- (d) population staying with friends or relatives.

The methodologies used to establish estimates and projections in each of these categories are described below.

Population in Seasonal Households

Seasonal households correspond to dwelling units which are occupied only part of the year. An estimate of 1980 seasonal households was established in the 1986 Comprehensive Plan. The seasonal population in households in 1980 was estimated at 21,493.

The U.S. Bureau of the Census provides information on seasonal housing in its report, Selected Population and Housing Characteristics: 1990, which serves as the basis for the number of units. A frictional vacancy factor of 3.5 percent was applied to the total rental housing stock. Peak seasonal occupancy percentages were applied to the seasonal housing inventory to determine the peak number of occupied seasonal units.

The peak number of occupied seasonal units (11,179) indicated in Table 2.19 was assumed to be occupied by an average of 2.24 persons each (1990 Census - person per household average). Based on these assumptions, 1990 seasonal population in households is estimated at 25,040.

Table 2.19

Peak Seasonal Population in Households Monroe County (1990)

<u>Seasonal Households</u>	<u>No. of Units 1)2)</u>	<u>Peak Seasonal Occupancy</u> (percentage)	<u>Peak No. of Occupied Seasonal Units</u>	<u>Persons Per Household</u>	<u>Peak Seasonal Population in Housing Units</u>
Seasonal & Migratory Units	2,339	100%	2,339	2.24	5,239
Vacant Units Avail. for Rent	2,004	100%	2,004	2.24	4,489
Less Frictional Vacancies	516	-	(516)	-	(1,156)
Units Held for Occas'l. Use	5,589	100%	5,589	2.24	12,519
Vacant Units-other purposes	1,763	100%	<u>1,763</u>	2.24	<u>3,949</u>
			<u>11,179</u>		<u>25,040</u>

1) 1990 Census.

2) Established by Monroe County Planning Department (1986 Comprehensive Plan Volume I, page 524).

Source: BRW, Inc., 1990, U.S. Census, 1990; PriceWaterhouse.

Population in Tourist Facilities

Visitors staying in hotels, motels and campgrounds were estimated for 1990 as shown in Table 2.20. The number of units in each type of accommodation in 1990 multiplied by the estimated persons per unit and the peak occupancy rate yields a 1990 estimate of a peak visitor population (visitors staying in tourist facilities) of 21,026.

Table 2.20
**Seasonal Population in Tourist Facilities
Monroe County (1990)**

Type of Accommodation	Number of Units (a)	Persons per Unit	Peak occupancy rate	Peak population
Hotel	1,459	2.2 (b)	91% (c)	2,921
Motel	5,747	2.2 (b)	91% (c)	11,505
Campground	2,785	2.37 (d)	100% (d)	6,600
Total				21,026

- (a) Florida Department of Business Regulation; Monroe County Tourist Development Office.
- (b) Florida Visitor Study, (statewide average of air and auto travelers staying in each type of facility).
- (c) Pannell Kerr Forster Report, Trends in the Hotel Industry - Monroe County, 1990.
- (d) Florida Campgrounds Association, 1990.

Source: Price Waterhouse

Population on Live-aboard Vessels

Monroe County is well known for its recreational boating opportunities. There is however, a significant number of people in the County who reside on (or live aboard) their boats for part of the year. Information on these numbers is scarce.

The number of live-aboard vessels which provide housing for a small percentage of the County's seasonal population have recently been documented in the Florida Keys by a study called Boat Live-Aboards in the Florida Keys: A New Factor in Waterfront Development published in September, 1990. The study indicates that there were 1,388 live-aboard vessels based on a 1988 survey with an average of 1.8 persons per vessel. Thus, the peak seasonal live-aboard population is estimated to be 2,498 people.

Population Staying with Friends/Relatives

The fourth component of seasonal population analyzed is the number of Monroe County visitors staying with friends or relatives. This is perhaps the most difficult component to assess since only limited data is available.

On a statewide basis, according to surveys conducted by the Florida Division of Tourism, approximately 35 percent of visitors surveyed stayed with friends or relatives on their Florida vacation and approximately 46 percent stayed in hotels. Based on quarterly reports for Monroe County from the Florida Visitors Survey, the percentage of visitors staying with friends and relatives in Monroe is estimated at 31 percent and the percentage of visitors staying in hotels is 55 percent. The percentage of visitors staying with friends and relatives is lower and the percentage staying in hotels is higher in Monroe County.

Since the number of visitors staying in hotels and motels has already been established for 1990 (14,426), those staying with friends or relatives was derived by using the estimated ratio of visitors staying with friends or relatives (31 percent) to visitors staying in hotels and motels in Monroe County (55 percent). Thus, in 1990, the ratio of visitors staying with friends or relatives to hotel/motel guests was estimated at 56 percent. This ratio applied to the 1990 hotel/motel population yields an estimated 8,079 seasonal population staying with friends or relatives.

C. Functional Population

The total 1990 peak seasonal population, from the above four components, is 56,643 in Monroe County of which 43,110 is estimated to be within the unincorporated area. Resident population combined with seasonal population represent the "total functional population" of Monroe County. Estimated total functional population is presented below:

Table 2.21

Total Functional Population Monroe County (1990)

Resident Population	78,024
Seasonal Population	
Population in Seasonal Households	25,040
Population in Tourist Facilities	21,026
Population on Live-aboard Vessels	2,498
Population staying with Friends/ Relatives	<u>8,079</u>
Sub-Total Seasonal Population	<u>56,643</u>
Total Functional Population	<u>134,667</u>

Source: U.S. Census, Price Waterhouse.

2.2.3 Population Projections Based on Historical Trends

For the purposes of comprehensive planning and evaluation of the carrying capacities of infrastructure systems, population is defined to include seasonal residents, overnight visitors and tourists occupying various types of tourist accommodations as well as permanent residents. The combined total of permanent residents and all categories of non-permanent residents and overnight visitors are referred to in this analysis as the functional population of Monroe County.

Utilizing the best available data, each component of Monroe County's functional population is analyzed and projected in the following paragraphs. These baseline population projections assume continuation of historical population trends without concurrency, carrying capacity or regulatory constraints.

Resident Population

In 1990, Monroe County had a resident population of 78,024, with 52,032 people located in the unincorporated County and 25,992 in the incorporated cities (U.S. Census 1990).

As shown in Table 2.22, the unincorporated County comprises almost 67 percent of the resident population. Assuming that the unincorporated County will continue to attract new residents proportionate to its current share of the total County population, and factoring in the declining growth rate in the incorporated County, projections can be generated for all components of Monroe County's resident population unconstrained by carrying capacity or other regulatory factors. Assuming no legislative or regulatory constraints, total population in the County is projected to grow to an estimated 99,600 residents by 2010, of which 70 percent will reside in unincorporated Monroe County. These figures continue the trend towards locating within the unincorporated County as well as a gradual decline in the rate of increase. By 2010, the average annual growth rate within the unincorporated County will be 1.2 percent.

Table 2.22
Baseline Resident Population Projections
Monroe County Incorporated and Unincorporated Areas (1980-2010)

Year	Population	Population Change	Average Annual Change	Compound Annual Rate of Change (%)	Percent of County Total (%)
Unincorporated Monroe County					
1980	37,741	13,189	1,319	4.4	59.7
1990	52,032	14,291	1,429	3.3	66.7
1995	57,395	5,363	1,073	2.0	67.9
2000	61,536	4,141	828	1.4	68.5
2005	65,588	4,052	810	1.3	69.2
2010	69,574	3,986	797	1.2	69.9
Incorporated Areas of Monroe County					
1980	25,447				40.3
1990	25,992	545	55	0.2	33.3
1995	27,105	1,113	223	0.8	32.1
2000	28,264	1,159	232	0.8	31.5
2005	29,212	948	190	0.7	30.8
2010	30,026	814	163	0.6	30.1
Monroe County					
1980	63,188				100.0
1990	78,024	14,836	1,484	2.1	100.0
1995	84,500	6,476	1,295	1.6	100.0
2000	89,800	5,300	1,060	1.2	100.0
2005	94,800	5,000	1,000	1.1	100.0
2010	99,600	4,800	960	1.0	100.0

Note: Trend based projections assuming no infrastructure carrying capacity or regulatory constraints on growth.
Source: U. S. Department of Commerce, Bureau of Census; Florida Statistical Abstract; PriceWaterhouse.

Resident Household Projections

Consistent with national and local trends towards smaller household sizes, Monroe County's average household size is expected to continue to decline through the year 2010, when the average household size is projected to reach 2.06 persons. Table 2.23 shows the projected number of households and average household size for the unincorporated County over the next twenty years, in five year increments. As the population increases and household size decreases, the demand for dwelling units will increase at a somewhat higher rate than the population. The implications of these figures are discussed in detail in the Housing Element.

Table 2.23
Baseline Resident Household Projections
Unincorporated Monroe County
1990-2010

Year	Population	Households	Persons Per Household
1990	52,032	22,564	2.21
1995	57,395	25,327	2.17
2000	61,536	27,638	2.13
2005	65,588	29,992	2.10
2010	69,574	32,402	2.06

Source: County Projections 1990-2010 from BEBR Population Studies, Volume 24, Number 2, Bulletin No. 96, July, 1991; Price Waterhouse.

Table 2.24
Baseline Projections of Population by Age
Monroe County

Age Group	1990		1995		2000	
	Number	Percent	Number	Percent	Number	Percent
Under Age 25	19,623	25.1%	21,379	25.3%	22,091	24.6%
25 - 64	45,945	58.9	50,108	59.3	53,431	59.5
65 and over	12,456	16.0	13,013	15.4	14,278	15.9
Total	78,024	100.0%	84,500	100.0%	89,800	100.0%

Source: U.S. Census, 1990; Bureau of Economic and Business Research (BEBR); and Price Waterhouse.

Resident Projections by Age

The projected distribution of resident population by age in Monroe County is shown in Table 2.24, for the years 1990, 1995 and 2000 (BEBR, 1988).

The age distribution of Monroe County's population is not expected to change significantly between now and the year 2000 as illustrated in Table 2.24. Projections in Table 2.24 show a minor increase in the 25 - 64 age bracket with slight declines in the percentages of persons under age 25 and those 65 years of age and over.

Seasonal Population

A 1990 total peak seasonal population estimate for Monroe County was derived by combining the 1990 population estimates from each of the four seasonal population categories. Total peak seasonal population is thus estimated at 56,643 for the County in 1990. For the purpose of baseline seasonal population projections, growth trends and factors influencing each respective category were evaluated.

Baseline projections of population in seasonal households and population staying with friends or relatives are based on the 1990 ratio of these factors to total population in households. Projections of population in tourist facilities and live-aboards are based on growth trend indicators specifically relating to these components.

Projections for unincorporated Monroe County were developed by deducting seasonal population projected for each municipality (Key Colony Beach, Layton and Key West). Seasonal population projections for Key Colony Beach were taken from the city's 1990 Comprehensive Plan. The seasonal population projection for Layton is based on BRW's Population Projections - Technical Support Document, 1990.

Key West seasonal population projections are based on the latest revised version of Key West's 1990 Comprehensive Plan (Solin and Associates, 1991). However, adjustments were made to the 1990 permanent resident population of Key West as it was reported in the revised Key West Comprehensive Plan. The population figures used in the revised plan were not the final 1990 U. S. Census population figures. The 1990 population for Key West in this plan is based on the current and final U. S. Census population count of 24,832. Key West's projections were adjusted upward to reflect 100 percent peak occupancy rates in tourist facilities so that the methodology was consistent with that used for the County. The resulting seasonal population projections for the incorporated and unincorporated areas of Monroe County are shown in Table 2.25.

Table 2.25
Baseline Projections of Resident and Seasonal Population
Monroe County
1980-2010

<u>Year</u>	<u>Monroe County</u>		<u>Unincorporated Monroe County</u>		<u>Incorporated Monroe County</u>	
	<u>Resident Pop.</u>	<u>Peak Seasonal Pop.</u>	<u>Resident Pop.</u>	<u>Peak Seasonal Pop.</u>	<u>Resident Pop.</u>	<u>Peak Seasonal Pop.</u>
1980	63,188	46,312	37,741	-	25,447	-
1990	78,024	56,643	52,032	43,110	25,992	13,533
1995	84,500	61,300	57,395	47,300	27,105	14,000
2000	89,800	66,100	61,536	51,500	28,264	14,600
2005	94,800	71,100	65,588	56,100	29,212	15,000
2010	99,600	76,200	69,574	61,000	30,026	15,200

Source: U.S. Census, 1980, 1990; Bureau of Economic and Business Research (BEBR), University of Florida; PriceWaterhouse.

Table 2.26
Baseline Population Projections
1990-2010

<u>Year</u>	<u>Monroe County</u>			<u>Unincorporated Monroe County</u>			<u>Incorporated Monroe County</u>		
	<u>Res. Pop.</u>	<u>Peak Seas.</u>	<u>Total Funct'l</u>	<u>Res. Pop.</u>	<u>Peak Seas.</u>	<u>Total Funct'l</u>	<u>Res. Pop.</u>	<u>Peak Seas.</u>	<u>Total Funct'l</u>
1990	78,024	56,643	134,667	52,032	43,110	95,142	25,992	13,533	39,525
1995	84,500	61,300	145,800	57,395	47,300	104,694	27,105	14,000	41,105
2000	89,800	66,100	155,900	61,536	51,500	113,036	28,264	14,600	42,864
2005	94,800	71,100	165,900	65,588	56,100	121,688	29,212	15,000	44,212
2010	99,600	76,200	175,800	69,574	61,000	130,574	30,026	15,200	45,226

Source: U.S. Census, 1980, 1990; Bureau of Economic and Business Research (BEBR), University of Florida; PriceWaterhouse.

Functional Population

To develop reasonable projections of total required services and facilities for Monroe County, both resident and seasonal population are taken into account within each appropriate element of the comprehensive plan. As noted previously, the combination of resident and seasonal populations is termed "total functional population."

Table 2.26 presents baseline population projections for Monroe County and the distribution of population between the incorporated and unincorporated areas of the County. These baseline projections assume continuation of historical population trends without concurrency, carrying capacity or regulatory constraints.

Geographic Allocation of Population (Baseline)

Baseline resident and seasonal population projections for unincorporated Monroe County were allocated to subcounty planning areas. Planning areas used for projection purposes were based on those originally defined by James L. Hatchitt in his 1987 population projection model (Hatchitt, 1987). Hatchitt's analysis aggregated all data to a level with contiguous boundaries between census enumeration districts and planning areas designated by the Monroe County Planning Department.

The aggregated subcounty areas are referred to as Planning Analysis Area/Enumeration Districts (PAED's). These PAED's represent the best available framework for compilation and analysis of 1990 census data. The PAED's and corresponding area descriptions are listed for reference purposes in Table 2.27 and shown on the accompanying maps.

The PAED's are aggregated into three areas; Lower Keys, Middle Keys and the Upper Keys. The Lower Keys are defined as that part of unincorporated Monroe County south and/or west of the Seven Mile Bridge (i.e., Little Duck, Missouri and Ohio Keys, Bahia Honda, West Summerland/Spanish Harbor and south to Stock Island). The Middle Keys are defined as that part of unincorporated Monroe County between the Seven Mile Bridge and the Whale Harbor Bridge (i.e., Islamorada, Upper and Lower Matecumbe, Fiesta Key, Long Key, Conch Key, Walkers Island, Duck Key, Fat Deer Key, Marathon and Pigeon Key). The Upper Keys include that part of unincorporated Monroe County north of the Whale Harbor Bridge (i.e., North Key Largo, Key Largo, Tavernier, Plantation and Windley Key/Holiday Isle). Although Windley Key is included in the Upper Keys for the purpose of this plan, it is within PAED 12 (Middle Keys) in analyses compiled from PAED statistics.

The methodology used to allocate resident population projections by PAED included two key factors: (1) area-by-area pattern of population change from 1980 to 1990; and (2) the capacity of vacant buildable lots as defined in the October 1991, Inventory of Platted Subdivisions update. Population capacity was derived by applying existing density (housing and population) to the estimated inventory of buildable lots (including lots that would be rendered unbuildable by proposed policy to prohibit development in undisturbed saltmarsh and buttonwood wetlands).

The methodology used to allocate seasonal population projections by PAED included three key factors: (1) the distribution of seasonal housing units based on 1990 Census data; (2) the distribution of tourist facilities (hotels, motels and campgrounds) based on Monroe County Tourist Development Council information and related data; and (3) the distribution of all housing units.

Table 2.27
Designation of Subcounty Areas
Monroe County

<u>PAED</u>	<u>KEY AREAS</u>	<u>PLANNING AREA</u>
1	Stock, Cow and Key Haven	2, 3
2	Boca Chica, Rockland, Big Coppitt CDP*, Geiger Key	4, 5, 6, 7
3	Saddlebunch, Upper and Lower Sugarloaf	8, 9, 10
4	Cudjoe, Summerland, Ramrod, Little, Middle, Big Torch, and No Name Keys	11, 12, 13, 14, 15, 16, 20
5	Big Pine Key	17, 18, 19
6	Spanish Harbor, Bahia Honda, Ohio, Missouri, Little Duck, and Pigeon Key	21
7	Knight, Vaca (Marathon), Stirrup and Boot	22, 23
8	Fat Deer (including Coco Plum), Crawl, and Little Crawl	24, 25
9	Grassy	26
10	Duck and Conch	27
11	Long Key and Fiesta	28
12	Lower Matecumbe, Craig and Windley	29, 31
13	Upper Matecumbe	30
14	Plantation	32
15	Lower Key Largo (Tavernier)	33
16	Key Largo (Dove)	34
17	Key Largo (Rock Harbor)	35
18	Key Largo (Tarpon Basin)	36
19	Key Largo (Largo Sound)	37
20	Key Largo (Blackwater Sound)	38
21	N. Key Largo (Port Bougainville to Angelfish), Cape Sable	39, 40, 41, 42
22	Cross Key to Dade County Line	43

* Census Designated Place

Source: James Hatchitt, 1987, Description of a Population Projection Model for Monroe County, and the Results of Projecting the Population to the Year 2005.

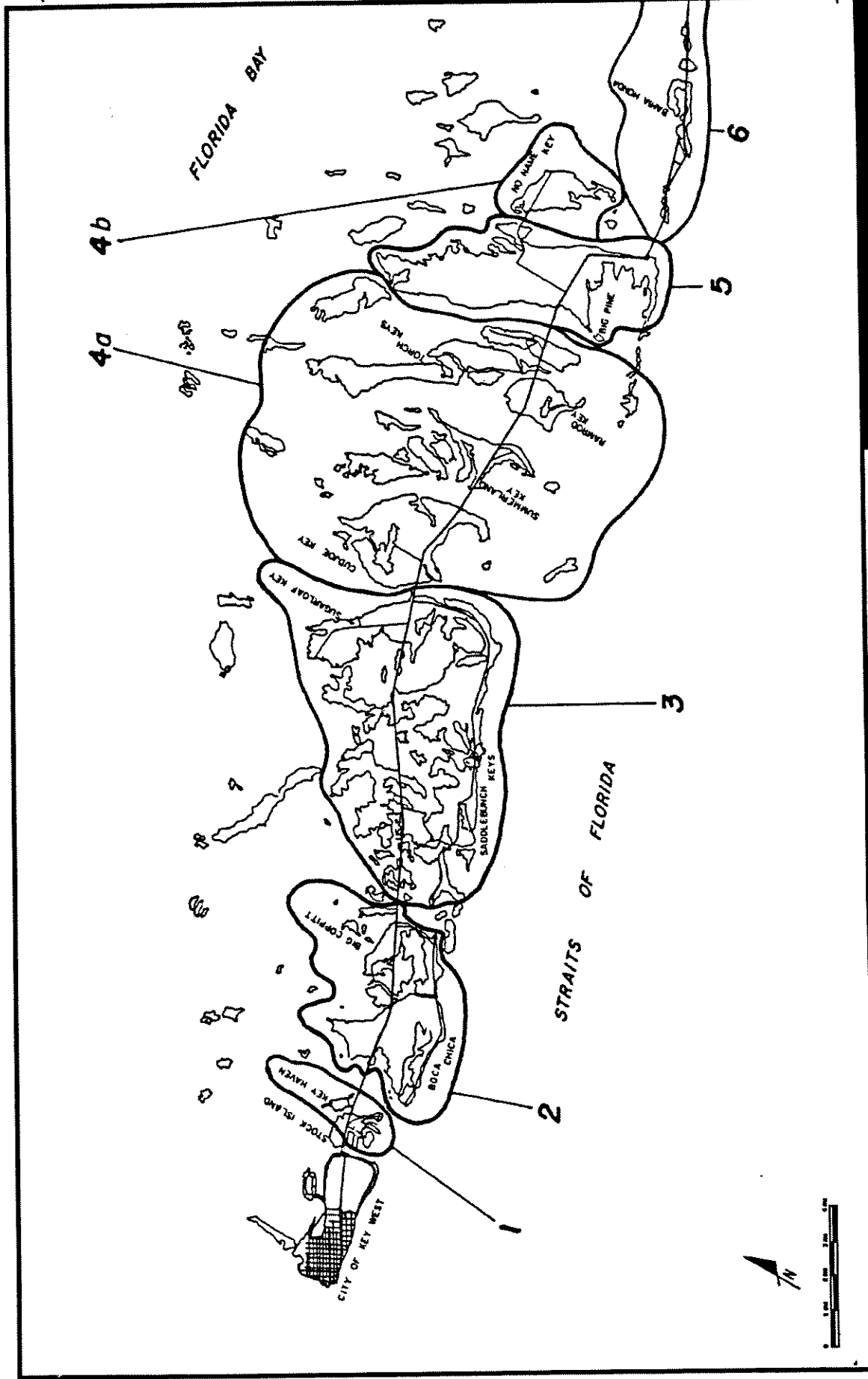
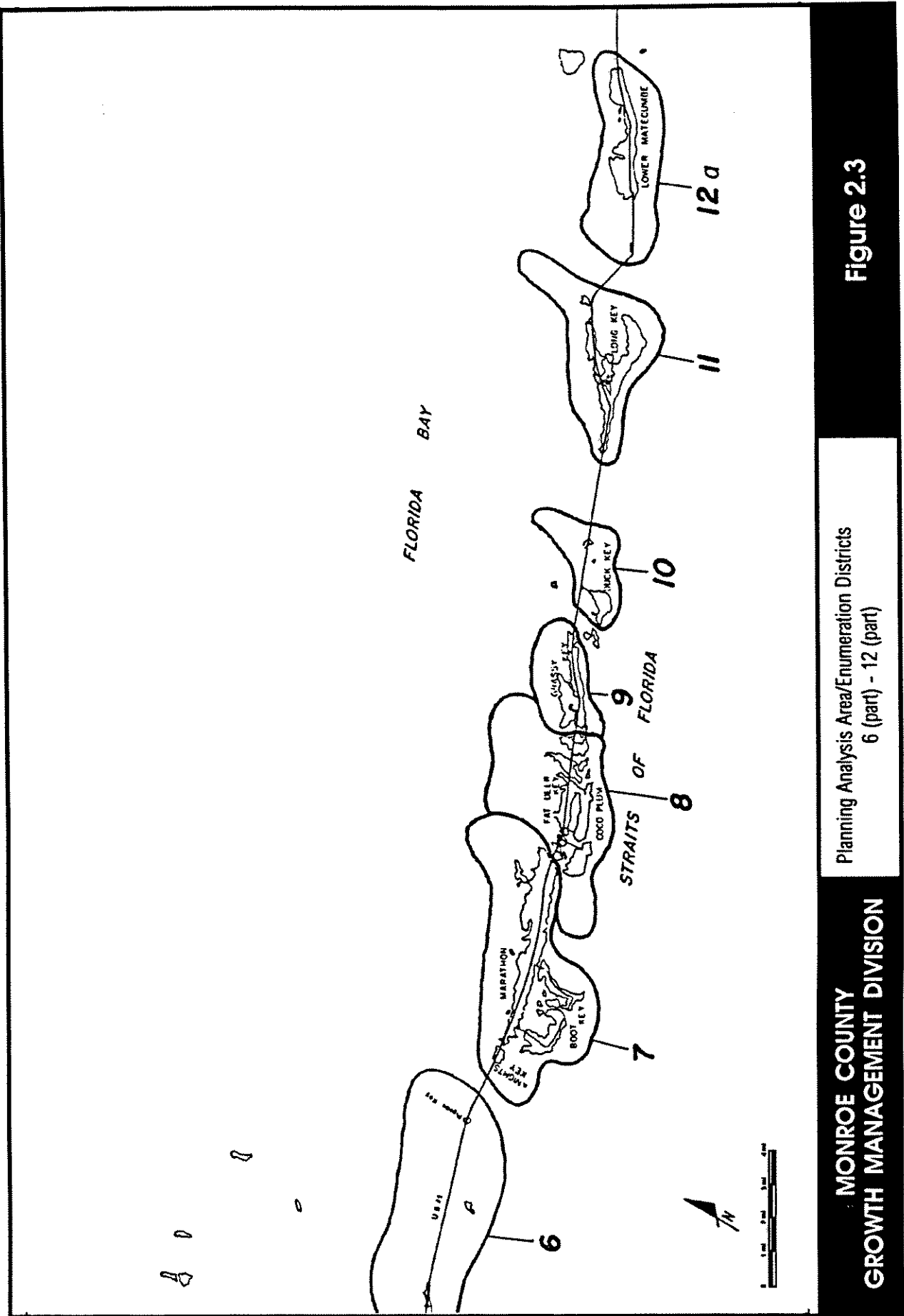
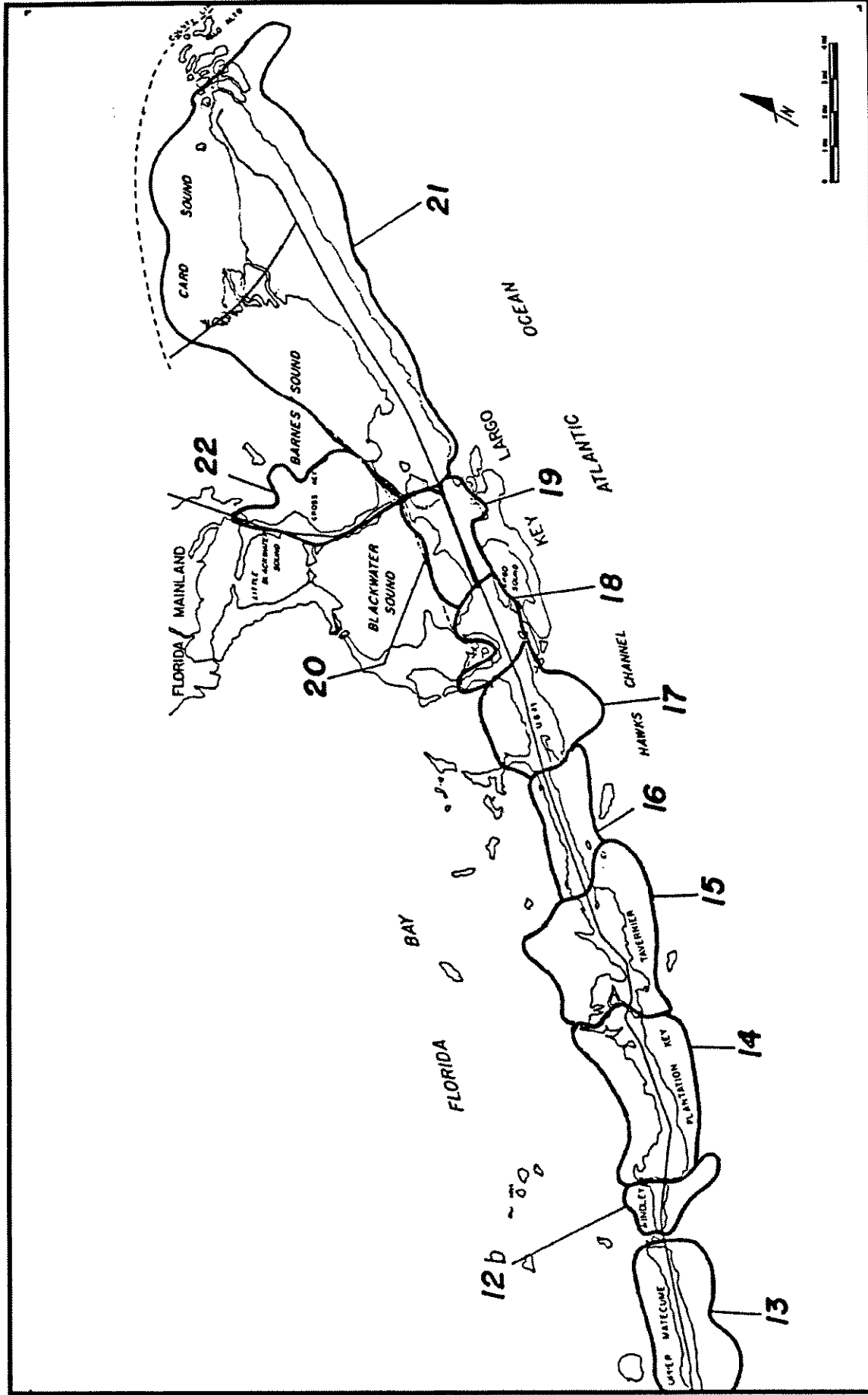


Figure 2.2

Planning Analysis Area/Enumeration Districts
1-6 (part)

MONROE COUNTY
GROWTH MANAGEMENT DIVISION





Planning Analysis Area/Enumeration Districts
12 (part) - 22

MONROE COUNTY
GROWTH MANAGEMENT DIVISION

Figure 2.4

These factors were weighted based on their respective impacts on the estimated total seasonal population in Monroe County.

The resulting baseline population estimates and projections are shown in Tables 2.28 and 2.29. Table 2.30 is a summation of the data provided in Tables 2.27 and 2.28, depicting total functional population by PAED.

2.3 Vacant Land Analysis

There are approximately 21,127 acres of vacant land in Monroe County, representing 34 percent of the County. The following section describes the suitability of this vacant land for development, focusing on natural resource constraints. The purpose of this analysis is to: (1) identify natural resource constraints; (2) determine how much of the vacant land is constrained; and (3) determine the extent to which development can be directed away from these natural resource constraints and toward areas that are intrinsically most suitable for development.

It should be noted that the total of 21,127 acres of vacant land does not include any of the 14,923 vacant, buildable lots zoned IS, URM, and CFV and located in platted subdivisions (see Section 2.1.2). Detailed natural resource information for the vacant IS, URM, and CFV lots is not currently available. However, development within platted subdivisions should be directed away from the sensitive natural resource factors discussed below.

2.3.1 Soils

Soils in the Florida Keys are severely constrained for developed uses, including shallow excavations, dwellings without basements, local roads and streets, and septic tank absorption fields (see Conservation and Coastal Management Section 3.4.2). The soils are most commonly severely constrained due to shallow depth to bedrock, flooding, and wetness. Soils characterized as "urban land" are potentially better development sites when compared to natural soils in the Keys. These soils have "variable" limitations for developed uses, reflecting their history of disturbance. However, most of these areas are already fully developed or are located in platted subdivisions. Therefore, since all of the "variable" soils are developed or disturbed, the soils of vacant lands all have "severe" limitations and there is no need to further differentiate vacant lands based on their soil suitability for development.

2.3.2 Topography

The Florida Keys are characterized by gradually sloping islands with low elevations (see Conservation and Coastal Management Section 3.3.1). Elevations are generally less than five feet above sea level, with the highest elevation on Windley Key at about 18 feet above sea level. In terms of constraints to development, the topography contributes to (1) a high water table resulting in the periodic or total inundation of many of the soils in the County, and (2) approximately 80 percent of the County being subject to storm surge impact from a Category 1 hurricane. These constraints to development are discussed in Sections 2.3.3A and 2.3.4 below.

Table 2.28
Resident Population Projections
Unincorporated Monroe County 1990-2010
By Planning Area/Enumeration (PAED) Districts

PAED	1990	1995	2000	2005	2010
LOWER KEYS					
1	4,541	4,577	4,605	4,637	4,687
2	3,106	3,160	3,201	3,248	3,309
3	1,786	1,879	1,952	2,034	2,140
4	3,983	4,572	5,032	5,547	6,216
5	4,208	4,901	5,442	6,049	6,836
6	441	441	442	441	441
Sub-Total	18,065	19,530	20,674	21,956	23,620
MIDDLE KEYS					
7	8,861	9,345	9,723	10,146	10,696
8	697	956	1,116	1,116	1,116
9	1,086	1,198	1,285	1,383	1,510
10	629	709	771	841	932
11	356	356	356	356	356
12	1,096	1,295	1,450	1,624	1,684
13	1,220	1,220	1,220	1,220	1,220
Sub-Total	13,945	15,079	15,921	16,686	17,514
UPPER KEYS					
14	4,405	4,951	5,379	5,858	6,479
15	2,433	2,657	2,831	3,027	3,281
16	2,287	2,687	2,998	3,068	3,068
17	2,465	2,713	2,906	3,123	3,405
18	4,127	4,932	5,559	6,129	6,128
19	908	1,003	1,077	1,160	1,267
20	1,549	1,549	1,549	1,549	1,549
21	1,787	2,210	2,541	2,911	3,116
22	61	84	101	121	147
Sub-Total	20,022	22,786	24,941	26,946	28,440
PAED TOTAL	52,032	57,395	61,536	65,588	69,574

Note: The City of Key West, Key Colony Beach, and Layton are not included.
Cape Sable is included in PAED 21; Windley Key is included in PAED 12

Source: U.S. Census 1990, Price Waterhouse.

Table 2.29
Seasonal Population Projections
Unincorporated Monroe County 1990-2010
By Planning Area/Enumeration (PAED) Districts

PAED	1990	1995	2000	2005	2010
LOWER KEYS					
1	1,734	1,903	2,072	2,257	2,454
2	717	787	856	933	1,014
3	944	1,035	1,127	1,228	1,335
4	2,117	2,323	2,529	2,755	2,996
5	2,154	2,364	2,573	2,803	3,048
6	981	1,076	1,172	1,277	1,388
Sub-Total	8,647	9,488	10,329	11,253	12,235
MIDDLE KEYS					
7	5,099	5,593	6,092	6,633	7,215
8	371	407	443	482	524
9	455	500	544	593	644
10	1,917	2,104	2,291	2,495	2,713
11	1,401	1,537	1,673	1,823	1,982
12	1,650	1,811	1,971	2,148	2,335
13	2,049	2,249	2,448	2,667	2,900
Sub-Total	12,942	14,201	15,462	16,841	18,313
UPPER KEYS					
14	4,745	5,204	5,669	6,173	6,714
15	1,500	1,646	1,792	1,953	2,123
16	2,940	3,225	3,512	3,826	4,160
17	2,703	2,966	3,229	3,518	3,825
18	2,948	3,235	3,522	3,837	4,172
19	418	459	499	544	591
20	2,236	2,453	2,671	2,909	3,163
21	3,862	4,237	4,613	5,025	5,464
22	169	186	202	221	240
Sub-Total	21,521	23,611	25,709	28,006	30,452
PAED TOTAL	43,110	47,300	51,500	56,100	61,000

Note: The City of Key West, Key Colony Beach, and Layton are not included.
 Cape Sable is included in PAED 21; Windley Key is included in PAED 12

Source: U.S. Census 1990, Price Waterhouse.

Table 2.30
Functional Population Projections
Unincorporated Monroe County 1990-2010
By Planning Area/Enumeration (PAED) Districts

PAED	1990	1995	2000	2005	2010
LOWER KEYS					
1	6,275	6,480	6,667	6,894	7,132
2	3,823	3,946	4,057	4,181	4,323
3	2,730	2,915	3,079	3,262	3,475
4	6,100	6,895	7,561	8,302	9,212
5	6,362	7,265	8,015	8,852	9,884
6	1,422	1,517	1,614	1,718	1,829
Sub-Total	26,712	29,018	31,003	33,209	35,855
MIDDLE KEYS					
7	13,960	14,938	15,815	16,779	17,909
8	1,068	1,363	1,559	1,598	1,641
9	1,541	1,698	1,829	1,976	2,155
10	2,546	2,813	3,062	3,336	3,645
11	1,757	1,893	2,029	2,179	2,338
12	2,746	3,106	3,421	3,772	4,019
13	3,269	3,469	3,668	3,887	4,120
Sub-Total	26,887	29,280	31,383	33,527	35,827
UPPER KEYS					
14	9,150	10,155	11,048	12,031	13,192
15	3,933	4,303	4,623	4,980	5,404
16	5,227	5,912	6,510	6,894	7,228
17	5,168	5,679	6,135	6,641	7,230
18	7,075	8,167	9,081	9,966	10,300
19	1,326	1,462	1,576	1,704	1,859
20	3,785	4,002	4,220	4,458	4,712
21	5,649	6,447	7,154	7,936	8,580
22	230	270	303	342	387
Sub-Total	41,543	46,387	50,650	54,952	58,892
PAED TOTAL	95,142	104,695	113,036	121,688	130,574

Note: The City of Key West, Key Colony Beach, and Layton are not included.
Cape Sable is included in PAED 21; Windley Key is included in PAED 12

Source: U.S. Census 1990, Price Waterhouse.

2.3.3 Vegetation

A. Wetlands

Undisturbed Wetlands

Undisturbed wetland communities include mangroves, submerged lands, freshwater wetlands, and undisturbed saltmarsh and buttonwood wetlands. These biological communities are not suitable for development. Monroe County currently prohibits residential and non-residential development within mangroves, submerged lands, and freshwater wetlands (Monroe County BOCC, 1990). In addition, such development will be prohibited within undisturbed saltmarsh and buttonwood wetlands as part of the implementation of the Comprehensive Plan. Approximately 15,487 acres of vacant land in Monroe County are characterized by the presence of these wetland communities. Therefore, approximately 73 percent of the vacant land in Monroe County will not be subject to any residential or non-residential development.

The remaining 5,640 acres of vacant land are potentially subject to development according to the Monroe County LDRs (Monroe County BOCC, 1990). The relative suitabilities of this vacant land for development are discussed below.

Disturbed Wetlands

Disturbed wetlands have been altered by human activities which have re-directed or delayed primary succession and have caused "secondary succession" to take place. Disturbed wetlands are being mapped and evaluated as part of the ADID Program. Preliminary indications from this program suggest that disturbed wetland delineations will primarily encompass disturbed saltmarsh and buttonwood wetlands having low functional value and that disturbed wetlands generally occur on disturbed residential lots in IS, URM, and CFV zoning districts. (See Conservation and Coastal Management Section 3.9.8 for a full discussion of disturbed wetlands.)

Since mapped data of disturbed wetlands is not currently available, it is not possible to determine the extent to which vacant lands are characterized by disturbed wetlands. Disturbed wetlands generally occur on disturbed residential lots in IS, URM, and CFV zoning districts. Therefore, the 5,640 acres of vacant, developable land are not likely to be characterized by the presence of disturbed wetlands. Regardless of the location of disturbed wetlands, future development in the County should be directed away from these areas to the maximum extent possible.

B. Beach/Berm

The typical beach system in the Keys is comprised of a beach and associated berm. The most seaward component is the "beach," which is material, usually sand, that extends from the upper berm to the low water mark. The berm is a mound or ridge of unconsolidated sand that is immediately landward of, and usually parallel to, the shoreline and beach. The berm is higher in elevation than both the beach and the area landward of the berm, ranging from slightly above mean high water to more than 7 feet above mean sea level. In the Keys, beaches are typically 15 to 25 feet in width, reaching a maximum width of 60 feet in a few areas, while berms vary in width from 20 to 200 feet. (See Conservation and Coastal Management Section 3.10 for a full discussion of beach/berm communities).

Approximately 235 acres, or 9 percent, of the vacant, developable land are characterized by beach/berm communities. Future development in the County should be directed away from undisturbed beach/berm areas to the maximum extent possible.

C. Upland Vegetation

There are two native upland biological communities in the Florida Keys. These are:

- (a) tropical hardwood hammocks; and
- (b) pinelands.

Tropical Hardwood Hammocks

Tropical hardwood hammocks constitute the climax terrestrial community of South Florida and the Keys. This community is probably the richest in diversity of the natural communities found in the Keys, with approximately 100 species of wide tropical occurrence present in this community and nowhere else in the continental United States. (See Conservation and Coastal Management Element Section 3.11.1 for a full discussion of tropical hardwood hammocks).

Approximately 3,346 acres, or 59 percent, of the vacant, developable land are located in tropical hardwood hammocks. Future development in the County should be directed away from high quality hammocks to the maximum extent possible. This should be accomplished through land use policies of the Comprehensive Plan and its implementing Land Development Regulations.

Pinelands

Pinelands, or "slash pinelands," are fire-climax systems dominated by pine trees. Although pinelands formerly existed in the Upper Keys, their occurrence in Monroe County is presently limited to the Lower Keys, primarily on Little Pine Key, Big Pine Key, No Name Key, Cudjoe Key, Sugarloaf Key and on neighboring Keys. (See Conservation and Coastal Management Element Section 3.11.2 for a full discussion of pinelands).

Approximately 349 acres, or 6 percent, of the vacant, developable land are located in pineland communities. Future development should be directed away from high quality pinelands to the maximum extent possible. This should be accomplished through land use policies of the Comprehensive Plan and its implementing Land Development Regulations.

D. Disturbed

Many upland areas in the Keys have experienced disturbance of some kind, such as clearing for commercial or residential development and public facilities, which has interfered with natural succession in upland communities. These uplands comprise a third upland biological community in the Keys, referred to collectively as "disturbed lands."

Approximately 1,711 acres, or 30 percent, of the vacant, developable land are characterized by disturbed vegetation. Future development should be directed toward these lands to the maximum extent possible. This should be accomplished through land use policies of the Comprehensive Plan and its implementing Land Development Regulations.

2.3.4 Coastal High Hazard Area

The Coastal High Hazard Area (CHHA) is defined to include "areas which have historically experienced destruction or severe damage, or are scientifically predicted to experience destruction or severe damage, from storm surge, waves, erosion, or other manifestations of rapidly moving or storm driven water" (9J-5.003(14)). (See Conservation and Coastal Management Section 3.22.2 for a full discussion of the CHHA).

Approximately 3,633 acres, or 64 percent, of the vacant, developable land, is located within the CHHA. Future development should be directed away from the CHHA to the maximum extent possible in order to discourage private investment in areas subject to storm surge impact. However, it should be noted that since such a large percentage of the vacant land, as with the County as a whole, lies within the CHHA, it may not be possible to accommodate all future growth in areas which lie outside of the CHHA.

2.3.5 Units of the Coastal Barrier Resources System

The Coastal Barrier Resources Act (CBRA) of 1982 established the Coastal Barrier Resources System (CBRS). The CBRA legislation is specifically designed to restrict federally subsidized development of undeveloped coastal barriers in order to minimize the loss of human life, reduce the wasteful expenditure of federal revenue, and reduce damage to fish and wildlife habitat and other valuable natural resources of the coastal barriers (U.S.D.I., 1988). The CBRS includes fifteen units located within the Florida Keys. (See Conservation and Coastal Management Section 3.18.3 for a full discussion of CBRS units).

Approximately 949 acres, or 17 percent, of the vacant, developable land, is located within CBRS units. Future development should be directed away from these areas to the maximum extent possible. This should be accomplished through land use policies and other actions to discourage private investment in CBRS units.

2.3.6 Habitats of Threatened and Endangered Species

Biological communities in the Florida Keys have evolved in response to unique island environmental conditions characterized by salt water, hot sun, dry seasons and hurricanes. Extreme environmental conditions combined with the isolation of the island archipelago have supported colonization and evolution of highly specialized plants and animals. A total of 45 vertebrates, 4 invertebrates and 82 plants are designated as endangered, threatened or of special concern. (See Conservation and Coastal Management Element Section 3.13 for a full discussion of Threatened and Endangered Species).

Monroe County's mapped data base and records regarding the occurrences of designated species are incomplete at this time. Therefore, it is not possible to characterize the vacant land in terms of potential impacts to the habitat of all designated species. However, Monroe County should direct growth away from habitats of designated species which are currently known, including:

- (a) projects located within habitat areas identified as needed for the successful maintenance of the Key deer in its natural environment;
- (b) projects located within a specified horizontal distance of historic nesting sites of the southern bald eagle and roseate stern (distance to be established by the Monroe County Biologist);

- (c) projects which may adversely impact activities of the peregrin falcon and the piping plover on their wintering grounds (measures of adverse impacts to be established by the Monroe County Biologist);
- (d) projects located within hammocks which are used as habitat of the Schaus' swallowtail butterfly;
- (e) projects located within hammocks which are used as habitat of the Key Largo wood rat; and
- (f) projects located within hammocks which are used as habitat of the Key Largo cotton mouse.

2.3.7 Natural Groundwater Aquifer Recharge

A. Potable Water

The Surficial Aquifer System in the Keys does not contain water of sufficient quality and quantity to be considered as a viable freshwater supply. Monroe County receives its potable water from the Florida City Wellfield in Dade County (see Natural Groundwater Aquifer Recharge Element Section 12.2). Therefore, there is no need to characterize vacant land in terms of potential potable water recharge impacts.

B. Freshwater Lens Systems

Freshwater lenses in the Keys occur on Key West, Big Pine Key, Cudjoe Key, No Name Key, Ramrod Key and Sugarloaf Key. These freshwater lens systems are considered to be critical to the support of the existing wildlife and plant communities in these areas (see Natural Groundwater Aquifer Recharge Element Section 12.7 and Conservation and Coastal Management Element Section 2.9.7).

It is not currently possible to characterize vacant land in terms of potential freshwater lens recharge impacts. The Florida Game and Freshwater Fish Commission (FGFWFC) is currently mapping freshwater wetlands in the Keys in coordination with the Advance Wetlands Identification Program, now under as a joint effort by the U.S. Army Corps of Engineers, the Florida Department of Environmental Resources, the South Florida Water Management District (SFWMD) and Monroe County. Mapped information will be entered into the County's Geographic Information System (GIS) and plotted as an overlay at a scale of 1"=200'. Following the completion of the freshwater lens study, Monroe County will adopt regulations to minimize impervious areas and to protect freshwater lens recharge areas.

2.3.8 Historic and Archaeological Resources

The inventory of historic and archaeological resources (see Section 2.1.6 Historic Resources) indicates the presence of the following historic and archaeological resources of interest in Monroe County:

- (a) 12 sites listed on the National Register of Historic Places;
- (b) 2 historic districts - Pigeon Key and Tavernier; and
- (c) 322 archaeological sites.

Of the 12 sites listed on the National Register of Historic Places, two are located in Key West (not in Unincorporated Monroe County), seven are in public ownership, one includes three bridges along US 1, and two are in private ownership and may be potentially subject to impacts due to development on adjacent vacant land. These two sites include the Bat Tower, which is located along the western shore Upper Sugarloaf Sound (Map 7), and the Rock Mound which is located on Key Largo (Map 2). Although both of these sites are located adjacent to vacant land, as illustrated on the Natural Features Map and the Future Land Use Map by the Regulation Conservation Overlay category, this vacant land is characterized by the presence of either mangroves or undisturbed salt marsh and buttonwood wetlands. Both of these wetland communities are subject to 100 percent open space. Therefore, it is likely that neither of these historic sites will be disturbed by adjacent development.

Although these two historic sites may be afforded a degree of protection by wetlands regulations, neither of the sites has been designated a local archaeological, historical or cultural landmark according to the existing LDR guidelines (see Section 2.1.6F). Therefore, neither of these sites is afforded any protection on the local level based on their historic significance. Monroe County should establish procedures for designating sites as local historic and archaeological resources, and develop Land Development Regulations which protect historic resources. These standards should address the siting and design of proposed development to minimize impacts on designated historic resources.

The local historic districts of interest in Monroe County include Pigeon Key and Tavernier. Pigeon Key is a County-owned island that was once a work camp for the Overseas Railroad. Pigeon Key is not located adjacent to any vacant land which could potentially affect the historic nature of this island.

Although the Tavernier historic district has not been formally designated as a historic district, it has been the subject of a survey to identify sites, structures and buildings of historic, architectural or historic merit. The 75-acre tract shown on the Future Land Use Map as the Tavernier Historic District Overlay (Map 2), includes several parcels which are currently vacant. If Tavernier is established as a certified local historic district, it is important that architectural guidelines be established to ensure any future development is consistent with the character of the district.

The Archaeological and Historical Conservancy, Inc. (AHC) has surveyed 322 archaeological sites in Monroe County, of which many are in private ownership and located on vacant land (see Table 2.8). Of particular interest are ten sites which the AHC has recommended for public acquisition. Although most of these privately-owned archaeological sites may be protected from disturbance by other mechanisms, such as the County's 100 percent open space policy for wetland communities including mangroves, submerged lands, freshwater wetlands, and undisturbed salt marsh and buttonwood wetlands, it is important that the County evaluate the significance of archaeological resources, establish procedures for the designation of local historic and archaeological resources, and develop Land Development Regulations which specify the restrictions on archaeological sites resulting from local designation. These standards should address the siting and design of proposed development to minimize impacts on archaeological resources, and the proper documentation and recording of the site, including the retrieval of artifacts.

2.3.9 Summary of Vacant Land Analysis

Table 2.31 presents a summary of the 5,640 acres of vacant, developable land in terms of the coincidence of one or more of the following measurable natural resource factors:

- (a) vegetation (disturbed, beach/berm, tropical hardwood hammock, and pineland);
- (b) location within the CHHA; and
- (c) location within CBRS units.

In general, areas that are the most suitable for development are those which are characterized by disturbed vegetation, are not located in the CHHA, and are not located within CBRS units. Approximately 665 acres, or only 12 percent, of the vacant, developable land exhibits all three of these characteristics and are therefore not constrained.

The remaining 4,975 acres of vacant, developable land is constrained by one or more of the natural resource factors described above. The suitability of this land for development (from most to least suitable) is as follows:

- (a) Land that is characterized by the presence of natural vegetation (tropical hardwood hammock, pineland, and beach/berm) and that is not located within either the CHHA or the CBRS. This amounts to approximately 1,137 acres, or 20 percent, of the vacant, developable land.
- (b) Land characterized by the presence of either disturbed or natural vegetation and that is located within CBRS units but outside of the CHHA. This amounts to 204 acres, or 4 percent, of the vacant, developable land.
- (c) Land characterized by the presence of disturbed vegetation and that is located within the CHHA only or both the CHHA and CBRS units. This amounts to 1,019 acres, or 18 percent of the vacant, developable land.
- (d) Land characterized by the presence of natural vegetation and that is located within the CHHA only. This amounts to approximately 2,004 acres, or 35 percent of the vacant, developable land.
- (e) Land characterized by natural vegetation and that is located within both the CHHA and CBRS units. This amounts to only 610 acres, or 11 percent, of the total vacant, developable land.

Table 2.31
Vacant Land Analysis (acres) (1)

Vegetation	Coastal High Hazard Area (CHHA)		Coastal Barrier Resources System (CBRS)
	In	Out	
Disturbed	134	26	In
	885	665	Out
Hammock	493	175	In
	1,695	983	Out
Pineland	85	0	In
	153	111	Out
Beach/Berm	32	3	In
	156	44	Out

Legend:

Relative Suitability for Development	Most ▲	Vegetation/ CHHA/CBRS		Acres	Percent of Total
		000	Disturbed/Out/Out		
		000	Natural/Out/Out		
		000	Disturbed & Natural/Out/In		
		000	Disturbed/In/Out & In		
		000	Natural/In/Out		
	Least ▼	000	Natural/In/In		
Total				5,640	100

(1) Includes vacant, developable land. Does not include: (1) approximately 15,487 acres of vacant land characterized by the presence of wetland vegetation within which new residential or non-residential development will be prohibited; or (2) approximately 14,923 vacant, buildable lots zoned IS, URM, and CFV and located in platted subdivisions.

Acreages derived from measurements of vacant land, CHHA, and CBRS shown on the Existing Land Use map series and vegetation shown on the Natural Features Map series.

Source: Wallace Roberts & Todd, 1992

This analysis indicates two significant issues which will guide future development patterns in Monroe County:

- (a) the majority of vacant land (approximately 73 percent) in Monroe County is characterized by the presence of mangroves, submerged lands, freshwater wetlands and undisturbed salt marsh and buttonwood wetlands. These lands will remain in open space since Monroe County prohibits residential and non-residential development within these wetland communities; and
- (b) there are approximately 14,923 vacant, buildable lots zones IS, URM, and CFV and located in platted subdivisions. Although detailed natural resource information for these lots is not currently available, these lots are known to generally be characterized by disturbed lands.

Since these vacant lots can accommodate residential development in Monroe County well into the future, development should be directed away from the vacant, unplatted land characterized by the sensitive natural resource factors evaluated in this analysis, including natural, undisturbed vegetation communities, the Coastal High Hazard Area, and units of the Coastal Barrier Resources System, to the maximum extent possible. In addition to natural resources, this analysis has indicated the need to develop guidelines related to the protection of archaeological and historic resources which may be affected by future development activities.

2.4 Future Land Use Analysis

2.4.1 Future Land Use Concept

Similar to most other Florida communities that have accommodated several decades of growth, the character of the Florida Keys has been permanently altered by a sprawling pattern of residential, tourist, and commercial development. This growth now threatens the continued viability of the resources valued by most who visit or live in the Keys. Although some development has been sensitive and has created attractive communities, growth has had several general negative consequences:

- (a) the sensitive and ecologically unique biological communities of the Florida Keys - the flora, fauna and marine habitats - have suffered damage and degradation;
- (b) developed land uses now intrude upon the unique visual setting of the subtropical landscape; and
- (c) the ability of the community to accommodate growth - its carrying capacity - is nearing its limits.

The Goals, Objectives and Policies established in the Policy Document, in conjunction with new Land Development Regulations and other implementing mechanisms, will alter both the **rate** and **distribution** of growth so as to ensure that future patterns of land use are tailored to the following three key factors which are considered to be the critical land use determinants:

- (a) carrying capacity limitations;

- (b) natural resource protection; and
- (c) enhancement of community character.

The "vision" for future land use in Monroe County reflects these three critical land use determinants: the need to constrain future growth based upon carrying capacity constraints, the need to protect the fragile remaining natural resources, and the need to enhance the community character of the Florida Keys. As described in Sections 2.4.1A and 2.4.1B, the rate of future growth will be limited by implementing a Permit Allocation System in order to maintain hurricane evacuation clearance times, the critical measure of carrying capacity. The distribution of future growth will be managed by implementing a Point System in conjunction with the Permit Allocation System which will guide development in order to avoid environmentally sensitive resources and maintain and enhance the traditional community character of the Keys (see Section 2.4.1D). The concept is one in which residential growth is shifted toward lower density, but compact, single-family development and away from multi-family condominium and hotel/motel resort development. Specifically, this means clustering new residential growth as infill development within well-established subdivisions and discouraging growth within undeveloped subdivisions, acreage tracts, and areas characterized by sensitive natural resources or natural hazards.

The concept for commercial and other non-residential growth begins with the premise that the rate of such growth should be limited to provide only the amount of development needed to serve additional residential growth. The distribution of future non-residential growth reflects the need to curtail the proliferation of commercial strip development along US 1 which tends to degrade community character, fragment open space, and impede traffic flow. As an alternative to the current pattern of strip development, clustering of new commercial growth as infill development within already established "community centers" such as Key Largo, Tavernier, and Marathon will be encouraged. Although Big Pine Key is now functioning as a "community center," the constraints imposed by the presence of Key deer habitat and congested traffic conditions are such as to preclude further intensification of the existing cluster of non-residential land uses.

The net effect of this compact, but low-density, pattern of both residential and non-residential development will be to:

- (a) reduce sprawl, consistent with Rules 9J-5.006(3)(b) and 9J-5.011(2)(b)3, Florida Administrative Code;
- (b) improve development efficiency, by guiding development to existing growth areas where infrastructure systems are in place and where unit costs for public services and facilities are relatively low;
- (c) improve community character, by reinforcing the low-density, informal residential lifestyle of the Keys and encouraging development which respects the intrinsic value of the Keys' natural and social history; and
- (d) protect resources, by guiding development away from wetlands, hammocks, and other natural and scenic resources which historically have been sacrificed to speculative real estate pressures.

A. Carrying Capacity Limitations

Carrying capacity refers to the capability of a system to absorb additional population growth and development within the parameters of an acceptable environment. In Monroe County, these parameters are measured by the level of service standards or other capacity limitation established by the Comprehensive Plan. The facility which can serve the least amount of new development within the limits set by the level of service standards or other capacity limitation can be identified as the critical measure of carrying capacity.

In general, comprehensive planning conducted in accordance with Florida's Local Government Comprehensive Planning and Land Development Regulation Act (Chapter 163, Part II, FS) and Rule 9J-5 is structured to tailor future development patterns and public services and facilities to reflect projected population growth. Although the population projections presented in Section 2.2.3 are based on historical trends, there are some unique circumstances in Monroe County which indicate that future development should not be expected to match statistical projections of population growth.

No other county in Florida consists of a 112-mile long chain of islands, isolated from the mainland, and without a ready supply of locally available potable water. No other county has such a high proportion of environmentally sensitive land, much of which will remain in perpetuity as open space. No other county faces the severity of the challenge of safe hurricane evacuation as does Monroe County. Nor does any other county face such high costs to provide for basic public services and facilities, or such fiscal limitations and uncertainties regarding the property tax base. These severe development constraints mandate that the Comprehensive Plan provide for a level of growth based on Monroe County's carrying capacity, rather than simply matching growth to projected population based on trend growth dynamics.

Monroe County's biological communities and nearshore waters have suffered impacts from man's activities, including habitat loss and environmental contamination. At present, scientific data are not available to support an assessment of the carrying capacity of these resources to absorb the impacts of man without suffering further irreversible damage. Nearshore and offshore water quality degradation has been proposed as a measure of environmental carrying capacity, expressed as the amount of anthropogenic pollutant loading that can be absorbed before the living marine resources - the mangroves, seagrass beds and coral communities - of the Keys show evidence of irreversible decline. Assessments recently completed for the Phase I Florida Keys National Marine Sanctuary (FKNMS) Water Quality Protection Program (CSA, 1992) have concluded that there is a relative paucity of data presently available to assess the water quality of the Keys as well as the impacts of degraded water quality on living marine resources. This is due to the lack of well designed, long-term studies (CSA, 1992). Several research programs are under consideration which will provide the baseline data needed to model "environmental carrying capacity". These will be undertaken by federal and state agencies, with participation by Monroe County, upon implementation of the Florida Keys National Marine Sanctuary Management Plan in the summer of 1993. Until such studies are completed, a measure of "environmental carrying capacity" cannot be used to establish limitations on growth in the Keys.

Based on these findings, the determination of carrying capacity (i.e., the amount of growth which can be accommodated) is measured based upon the following key public capacity limitations:

- (a) the levels of service established by the Comprehensive Plan for the six public facility types described in Section 2.1.9 (roads, potable water, solid waste, sanitary sewer, drainage, and parks and recreation); and
- (b) the requirement that hurricane evacuation times for incorporated and unincorporated Monroe County be maintained at or below 30 hours in accordance with Monroe County Board of Commissioners policy direction established on February 4, 1991 (see Section 3.22.1 of the Conservation and Coastal Management Element).

Carrying capacity constraints based upon these key public capacity limitations are summarized in Table 2.32. As noted, the capacity figures presented in this table for the six facility types and hurricane evacuation are not equivalent because of the different areas served by the various service providers.

Traffic Circulation

Monroe County's roadway facilities do not critically constrain the amount of future growth that can be accommodated in the County (see Section 2.1.9). Although localized deficiencies characterize several segments of US 1, sufficient reserve capacity exists in the overall roadway system to accommodate existing and committed development plus an additional 5,738 residential units.

Potable Water

Monroe County's potable water facilities do not critically constrain the amount of future growth that can be accommodated in the County (see Section 2.1.9). The current FCAA Consumptive Use Permit, when compared to current potable water consumption rates, will provide sufficient potable water to accommodate existing and committed development plus an additional 18,258 equivalent residential units (ERU's) in unincorporated and incorporated Monroe County. However, it should be noted that this permit is subject to renewal in 1995.

Solid Waste

The current solid waste haul out contract, when compared to the Monroe County Department of Environmental Management's (DEM) projections for solid waste generation in 1991/92, will provide sufficient solid waste disposal capacity to accommodate existing and committed development plus an additional 3,711 ERU's in unincorporated and incorporated Monroe County except for the City of Key West (see Section 2.1.9). Solid waste is not considered to be an immediate, quantifiable capacity constraint for the following reasons:

- (a) The level of service standard of 95,000 tons of solid waste per year is based upon the current haul out contract, which will expire in 1995. The current disposal facilities in Broward County have reserve capacity available to accept solid waste from Monroe County in amounts greater than 95,000 tons a year. If Monroe County chooses to extend the current contract beyond 1995, the figure of 95,000 tons of solid waste per year to be hauled out of the County can be renegotiated if necessary. In addition, the existing Monroe County transfer stations do not represent constraints for future development (see Section 9.5 of the Solid Waste Element).

Table 2.32
Summary of Concurrency and Carrying Capacity Constraints

Facility/Service	1992 Gross Remaining Capacity (3)
Hurricane Evacuation (1)	2,552 (4)
Traffic Circulation (2)	5,738 (5)
Potable Water (2)	18,258 (6)
Solid Waste (2)	Not a constraint (3,711) (7)
Parks and Recreation (2)	Not a constraint (8)
Drainage (2)	Not an immediate, quantifiable constraint (9)
Sanitary Sewer (2)	Not an immediate, quantifiable constraint (9)

(1) Carrying capacity constraint only (not required to meet concurrency).

(2) Required to meet concurrency.

(3) Includes committed development (projected development between April 1, 1990 and plan adoption).

(4) Expressed in residential units for unincorporated Monroe County. In order to maintain hurricane evacuation clearance times at or below 30 hours, the maximum number of residential units that can be allowed in unincorporated Monroe County and the municipalities of Key West, Layton, and Key Colony Beach as of plan adoption is estimated at 3,699. The figure of 2,552 units allocated to unincorporated Monroe County assumes that 1,147 units will be allocated to the three municipalities.

(5) Maximum Allocation of Reserve Dwelling Units in unincorporated Monroe County (7,825 units - 2,087 committed units = 5,738 units) (see Table 4.8 of the Traffic Circulation Element).

(6) Expressed in equivalent residential units (ERU's) including non-residential development for unincorporated and incorporated Monroe County.

(7) Expressed in ERU's including non-residential development for unincorporated and incorporated Monroe County except for the City of Key West. Solid waste is not considered to be a carrying capacity constraint because the figure of 3,711 ERU's is based on the present terms of the haul out contract and does not take into account the reserve capacity of the Monroe County transfer facilities and the mainland disposal site, recycling programs, and DEM's current investigation of alternative solid waste processing and disposal technologies.

(8) Unincorporated Monroe County is presently experiencing a deficit of approximately 10.5 acres of activity-based recreational land. If additional parkland is acquired and developed to remedy the existing deficiency and serve future growth concurrent with the impacts of development, recreation will not be a carrying capacity limitation.

(9) Although sanitary sewage and drainage are not considered to be carrying capacity constraints at present, the results of the combined Sanitary Wastewater/Stormwater Management Master Plan may introduce an environmental measure of carrying capacity related to the impacts of sanitary sewer and/or drainage facilities on water quality.

Source: Barton Aschman, Keith & Schnars, Wallace Roberts & Todd

- (b) The amount of solid waste generated in Monroe County has been declining in recent years due in part to the implementation of recycling programs. Solid waste generation rates can be expected to further decline as Monroe County continues to implement measures to achieve the state-mandated goals of a 30 percent diversion rate from the municipal solid waste stream by January 1, 1994 and a 40 percent diversion rate by the year 2000.
- (c) The Monroe County DEM is currently investigating the feasibility of developing and implementing alternative technologies to address the County's solid waste processing and disposal needs beyond the period of the current haul out contract.

Sanitary Sewer

Sanitary sewer service is not currently considered to be a carrying capacity constraint because at the present time it is impossible to quantify the amount of additional development which can be accommodated without critically affecting Monroe County's environment. The level of service standards established in the Sanitary Sewer Element are intended to be interim standards which will be superseded by new standards based upon the results of the combined Sanitary Wastewater/Stormwater Management Master Plan (SW/SMMP). It is anticipated that the new standards will introduce an environmental measure of carrying capacity related to the impacts of sanitary sewer facilities on water quality.

Drainage

Drainage, similar to sanitary sewer is not currently considered to be a carrying capacity constraint because at the present time it is impossible to quantify the amount of additional development which can be accommodated without critically affecting Monroe County's environment. It is possible that the SW/SMMP will introduce an environmental measure of carrying capacity related to the impacts of drainage facilities on water quality.

Recreation

Although there is currently a deficit of activity-based recreational areas in Monroe County available to serve existing and committed development, this deficit is not considered critical because it can be addressed through the acquisition and development of approximately 10.5 acres of parkland. Additional activity-based recreational land can similarly be acquired and developed to meet future growth demands concurrent with the impacts of development.

Hurricane Evacuation

The critical carrying capacity constraint at the present time is related to the requirement that hurricane evacuation clearance times for Monroe County be maintained at or below 30 hours through the Year 2002, and further reduced to 24 hours by 2010. (see Section 3.21.1 of the Conservation and Coastal Management Element). Based upon hurricane evacuation clearance times, the remaining development capacity in unincorporated Monroe County and the municipalities of Key West, Layton, and Key Colony Beach is estimated at 3,693 residential units as of plan adoption¹. Assuming that 1,145 residential units are to be allocated to the three municipalities, the development capacity available in unincorporated Monroe County amounts to 2,548 residential units.

In order to achieve a reasonable balance between the need to maintain hurricane evacuation clearance times and the development expectations of Monroe County residents, the Future Land Use Concept allocates the remaining development capacity over a ten-year period. Prior to the end of this period, Monroe County will develop and implement regulatory mechanisms (e.g., extension of the Permit Allocation System described below), capital improvements (e.g., capacity improvements to US 1 in conjunction with the Florida Department of Transportation), and/or other measures necessary to reduce hurricane evacuation clearance times at or below 24 hours through the year 2010.

Although public facilities are not presently considered to be critical measures of carrying capacity, new development will be subject to the requirements of a Concurrency Management System which will ensure that adequate roadway, sanitary sewer, solid waste, drainage, potable water, and parks and recreation facilities are available concurrent with the impacts of development.

B. Permit Allocation System

Given the mandate to control growth within a limited measure of carrying capacity as determined by hurricane evacuation clearance times, there are several possible methods of "allocating" this growth. These methods include:

- (a) tailoring the Future Land Use Map to the amount of growth allowed by the carrying capacity limitations;
- (b) reducing densities and intensities to distribute growth uniformly among the Keys; or

¹This figure is based upon the following assumptions:

- (a) The development capacity remaining in Monroe County and the municipalities of Key West, Layton, and Key Colony Beach as of April 1, 1990 (the starting date used in the calculation of hurricane evacuation clearance times) amounts to 5,780 units.
- (b) Based upon recent growth trends, it is estimated that 2,087 permits issued for new residential development in unincorporated Monroe County during the period from April 1, 1990 to plan adoption (October 16, 1992) will result in completed units. Data on residential units permitted in the three municipalities during this period is not available. Therefore, the remaining development capacity in unincorporated Monroe County and the three municipalities as of October 16, 1992 amounts to 3,693 units.

- (c) allocating growth in measured annual increments by incorporating performance criteria in a Permit Allocation System.

Past actions to plat and zone property in the Florida Keys have created a magnitude of development expectations which is significantly greater than the actual amount of growth which can be allocated consistent with the critical measure of carrying capacity. As described in Section 2.1.2, 14,923 vacant buildable lots, or nearly six times the remaining development capacity set by hurricane evacuation as of plan adoption, existed in unincorporated Monroe County in October 1991. Therefore, methods of allocating the remaining growth allowed by carrying capacity limitations must balance considerations of effectiveness in properly allocating land uses with recognition of legitimate development expectations. A Permit Allocation System which allocates annual increments of growth and distributes this growth in accordance with explicit performance criteria (see Section 2.4.1D, Point System) is considered the mechanism best suited to the management of growth in the Florida Keys. This system will be implemented through the adoption of Land Development Regulations concurrent with plan adoption.

A Permit Allocation System, coupled with the Future Land Use Map Series, will be a key method to implement the goals, objectives and policies of the Comprehensive Plan, related specifically to protection of residents, visitors and property in the County from natural disasters, specifically including hurricanes. This mechanism will limit annual development in Monroe County to an amount and rate commensurate with the County's ability to maintain a reasonable and safe hurricane evacuation clearance time, as determined by completed studies. The present hurricane evacuation clearance time in Monroe County of 35 hours is unacceptably high. Based on a continuation of Monroe County's historic rate of growth, clearance time will continue to increase. Therefore, consistent with its responsibility for protecting the health and safety of its citizens, Monroe County must regulate the rate of population growth commensurate with planned increases in evacuation capacity to prevent further unacceptable increases in hurricane evacuation clearance time. Regulation of the rate of growth will also help to prevent further deterioration of public facility service levels, irreversible environmental degradation and potential land use conflicts. Specifically the point criteria used to evaluate development applications can be used to direct growth so as to prevent further environmental degradation by avoiding impacts on inshore and offshore reef waters, in coordination with the newly created Florida Keys National Marine Sanctuary, as well as on native vegetation and endangered species habitats.

In particular the regulation of development through a Rate of Growth Ordinance is mandated by the following facts:

- Monroe County's current 35 hour hurricane clearance time creates a serious risk of loss of life and property because it requires that a hurricane evacuation order must be given at a point in time where there is great uncertainty about the actual path of the storm.
- As the population of Monroe County increases, the hurricane evacuation clearance time will increase proportionately.
- As a general rule each hour of hurricane evacuation clearance time corresponds to 2,000 (evacuating) persons or 885 (evacuating) dwelling units.
- Since 1972, Monroe County has permitted an average of 552 new single family dwelling units each year which equates to an additional 1,247 persons per year.

Based upon these factors it is clearly necessary to strictly regulate the rate of population growth and development through a Permit Allocation System coupled with measures to increase capacity of evacuation routes, protect water quality and sensitive habitats and protect public facility investments.

Permit Allocation System for Residential Development

The adopted Permit Allocation System for residential development will establish procedures for limiting the number of permits issued for new residential development in unincorporated Monroe County during the ten-year period following plan adoption (from October 16, 1992 to September 30, 2002) in order to maintain hurricane evacuation clearance times at or below 30 hours. At the time of plan adoption it is estimated that the Permit Allocation System will allocate a total of 2,548 new residential units in unincorporated Monroe County, or approximately 255 units a year. This total will be revised by September 30, 1993 and annually thereafter based upon the actual number of new residential units constructed in the County between April 1, 1990 and plan adoption and in each subsequent year.

Consistent with maintaining existing community character while providing for affordable housing needs, the Permit Allocation System will allocate 80 percent of new residential growth within Monroe County to single-family homes and 20 percent of new residential growth to multi-family affordable units. Any portion of the 20 percent allocation not used for affordable multi-family housing will be used for affordable single-family housing. Any remaining portion of the 20 percent allocation not used for affordable single-family housing will be allocated to general (market rate) housing.

The Permit Allocation System will allocate no new residential growth to transient dwelling unit development including hotels, motels, RV parks, and campgrounds during the first five years following plan adoption.² Prior to September 30, 1997, new regulations will be implemented which either extend this prohibition for the remainder of the ten-year planning period or establish that a percentage of the remaining residential growth will be allocated to transient dwelling units.

With the assistance of the Florida Department of Community Affairs and the South Florida Regional Planning Council, Monroe County will initiate an interlocal agreement with the municipalities of Key West, Key Colony Beach and Layton to establish an intergovernmental entity responsible for allocating the relative proportions of the total residential development in the incorporated and unincorporated County (estimated at 3,693 units over the ten-year planning period) which will be permitted within the four jurisdictions.

Permit Allocation System for Non-Residential Development

Unlike residential growth, non-residential development (commercial, office, industrial and similar uses) does not generate additional population which would need to be evacuated in the event of a hurricane. Therefore, because non-residential growth does not directly impact hurricane evacuation clearance times, it is not constrained by this critical measure of carrying capacity. However, in order to ensure a reasonable balance between the amount of future non-residential (primarily commercial) development and the needs of a slower growing residential population, a Permit Allocation System for non-residential development will be implemented at the same time as the Permit Allocation

²For the purpose of calculating hurricane evacuation clearance times, transient dwelling units are considered to have the same impact as 0.6 equivalent residential units (ERU's).

System for residential development. This system will allocate non-residential development during the ten-year planning period to maintain a ratio of approximately 239 square feet of new non-residential development for each new residential unit permitted.³

Based upon the estimate of 2,552 residential units to be permitted in unincorporated Monroe County during the ten-year planning period, it is estimated that 610,000 square feet of non-residential development, or an average of 61,000 square feet a year, will be permitted during the same period. This total will be revised by September 30, 1993 and annually thereafter based upon the actual number of new residential units constructed in the County between April 1, 1990 and plan adoption, and the number of new residential units and square footage of non-residential development constructed in each subsequent year, in order to maintain the ratio of 239 square feet per residential unit. Public facilities will be exempted from the requirements of the Permit Allocation System for non-residential development.

C. Future Land Use Map

The Future Land Use Map series reflects the vision of the location and densities of development as well as the retention of open spaces in Monroe County. The patterns of development reflect historic development and natural resource constraints, as well as the future development potential of Monroe County. Generalized land use categories and densities and intensities of development have been established to:

- (a) encourage development on lands which are intrinsically most suitable for development;
- (b) reduce urban sprawl and encourage a more compact form of development;
- (c) protect sensitive natural resources; and
- (d) enhance the character of the community.

It should be noted that the future land use categories have been assigned to represent the generalized range of uses and densities and intensities of use. The full range of uses and the maximum densities and intensities of the future land use categories may not apply to all parcels assigned to a land use category. The uses and ranges of densities and intensities of uses to be permitted for individual parcels will depend upon consistency with the community character as well as Monroe County's environmental design criteria regarding the protection of natural resources, including the results of the Habitat Evaluation Index. Specific uses and ranges of densities and intensities of uses will be

³ In order to calculate this ratio, total permit activity for non-residential development was compared to total permit activity for all residential development (including hotel and motel units) in unincorporated Monroe County during the five year period from 1986 to 1990. During this period, 1,296,116 square feet of non-residential development was permitted, compared to 4,856 residential permits (including single-family, multi-family and mobile homes) and 573 hotel/motel units, for a total of 5,429 permits (Monroe County Planning Department, March 1991). Dividing the total square footage of non-residential development permitted by the total number of residential units permitted results in a ratio of 239 square feet of non-residential development per residential permit.

assigned to individual parcels in the Land Development Regulations. It should also be noted that residential and non-residential development in Monroe County is subject to the Permit Allocation System (see Section 2.4.1B). The densities and intensities of uses illustrated on the Future Land Use Map may not be achievable due to allocation restrictions of the Permit Allocation System.

Building on the concepts for land use categories contained in the current Land Development Regulations (Monroe County BOCC, 1990), the Future Land Use Map series reflects a pattern consistent with the land use districts discussed below. The range of densities and intensities of use discussed for the land use categories incorporates the concept of Maximum Net Density which is included in the existing Land Development Regulations (Monroe County BOCC, 1990). Therefore, the specified density ranges are not subject to being further increased through any flexible land use density provisions.

Residential Conservation

The Residential Conservation land use category includes areas of undisturbed native vegetation and environmentally sensitive natural resources, including all of the offshore islands not currently owned for conservation purposes. Existing development is and should remain extremely sparse in these areas due to the natural resource constraints on these lands. Development in these areas will be limited to very low density residential development in order to protect these natural resources.

The maximum permitted densities for offshore islands will be 0.1 dwelling units per acre, with mangroves excluded from the calculation of permitted density. Maximum permitted densities in Residential Conservation areas on the accessible Keys will range from 0.1 to 0.5 dwelling units per acre, with the actual permitted density based on the results of a habitat analysis. The Habitat Evaluation Index, currently described in Sections 9.5-336 through 9.5-342 of the Land Development Regulations (Monroe County BOCC, 1990), will be used for this purpose following its revision to give greater consideration to the habitat of species of special status.

The Residential Conservation land use category generally includes properties currently within the Offshore Island (OS) and Native Area (NA) land use districts described in Sections 9.5-202 through 9.5-225 of the Land Development Regulations (Monroe County BOCC, 1990). Also included in this category are several unimproved subdivisions within the Big Pine Key ACCC which are currently designated "ACCC."

Residential Low

This category includes areas which have been partially developed but still contain substantial native vegetation. In order to maintain the community character and protect natural resources, development within the Residential Low land use category will be limited to low-density residential development ranging from 0.5 to 1.0 dwelling units per acre. Compatible private recreational uses such as golf courses will be permitted in this category.

The Residential Low land use category generally includes properties within the Sparsely Settled (SS) and Sub Urban Residential (SR) land use districts described in Sections 9.5-202 through 9.5-225 of the Land Development Regulations (Monroe County BOCC, 1990). Also included in this category are several subdivisions with minor improvements within the Big Pine ACCC which are currently designated "ACCC."

Residential Medium

The Residential Medium land use category includes existing, improved subdivisions characterized by disturbed or scarified land. The majority of existing single-family residential development within Monroe County is currently located in these areas, and much of the future residential development will be directed into these subdivisions by the Point System (see Section 2.4.1D). In order to cluster development on these lands which generally have little natural resource or habitat value, maximum permitted densities will range from 3 to 8 dwelling units per acre.

The Residential Medium land use category generally includes properties within the Improved Subdivision (IS) land use district described in Sections 9.5-202 through 9.5-225 of the Land Development Regulations (Monroe County BOCC, 1990).

Residential High

The Residential High land use category includes disturbed or scarified land located in close proximity to established employment centers. This land use category will provide for a wide range of housing options, including high density single-family, multi-family, and institutional residential development. Maximum permitted densities will range from 6 to 12 dwelling units per acre for market rate housing and up to 25 units per acre for developments which include affordable or employee housing.

The Residential High land use category generally includes properties within the Urban Residential (UR), Urban Residential Mobile Home (URM), and Urban Residential Mobile Home-Limited (URML-L) land use districts described in Sections 9.5-202 through 9.5-225 of the Land Development Regulations (Monroe County BOCC, 1990).

Mixed Use/Commercial

Commercial uses catering to both residents of and visitors to Monroe County have traditionally been developed along US 1. The Mixed Use/Commercial land use category will reinforce the traditional development pattern within established commercial centers and will provide for a mix of predominantly commercial uses, including commercial retail and office uses and public buildings. Maximum permitted intensities within this category will range from 0.10 to 0.45 Floor Area Ratio (FAR). Residential development in the form of commercial apartments and institutional residential uses will also be permitted where compatible with surrounding uses. Maximum permitted densities for residential development will range from 6 to 12 units per acre.

Although the Permit Allocation System will allocate no new transient dwelling unit development during the first five years following plan adoption (see 2.4.1A above), existing hotels, motels, RV parks, and private campgrounds are included in this land use category. Any transient dwelling units which may be permitted after September 1997 would be included in this land use category.

The Mixed Use/Commercial land use category does not represent a shift in Monroe County policy to encourage mixed use developments. Rather, this land use category include areas which have historically included a mix of commercial, institutional and residential uses. The definitions of these land use categories include the full range of land uses and densities which may be permitted, however these land use categories are currently, and are expected to continue to be, predominated by commercial uses.

The Mixed Use/Commercial land use category generally includes properties within the Urban Commercial (UC), Sub Urban Commercial (SC), Destination Resort (DR), Recreational Vehicle (RV),

Mixed Use (MU) land use districts described in Sections 9.5-202 through 9.5-225 of the Land Development Regulations (Monroe County BOCC, 1990).

Mixed Use/Commercial Fishing

This land use category includes established concentrations of commercial fishing and marine-related uses, generally along waterfront locations, which should be maintained and enhanced. Included are uses which support the commercial fishing industry, including commercial marinas and landing facilities, processing plants, and retail, maintenance and storage uses. Maximum permitted intensities within this category will range from 0.10 to 0.40 FAR. Permanent tourist-oriented uses will not be permitted in these areas, although some flexibility should be permitted to allow commercial fishing operators to temporarily use trap storage areas and landings for retail purposes. Residential uses which are consistent with surrounding uses will be permitted in certain portions of this land use category to maintain and enhance the village character of these areas. Residential uses should not be permitted in areas of this land use category in which heavy commercial fishing operations are conducted and the associated noises, odors, and visual impacts will conflict with residential uses. Maximum permitted densities for residential development will range from 6 to 12 units per acre.

The Mixed Use/Commercial Fishing land use category generally includes properties within the Commercial Fishing Area (CFA), Commercial Fishing Village (CFV), and Commercial Fishing Special District (CFAs) land use districts described in Sections 9.5-202 through 9.5-225 of the Land Development Regulations (Monroe County BCC, 1990).

Industrial

The Industrial land use category provides for the development of industrial, manufacturing, and warehouse and distribution uses in established industrial areas. Maximum permitted intensities within this category will range from 0.20 to 0.60 FAR.

The Industrial land use category generally includes properties within the Industrial (I) and Maritime Industries (MI) land use district described in Sections 9.5-202 through 9.5-225 of the Land Development Regulations (Monroe County BCC, 1990) as well as existing industrial uses.

Agriculture/Mariculture

The Agriculture/Mariculture land use category includes existing agriculture/mariculture uses. Maximum permitted intensities within this category will range from 0.20 to 0.25 FAR.

Institutional

The Institutional land use category includes existing institutional uses, including hospitals, churches, and service clubs. Maximum permitted intensities within this land use category will range from 0.30 to 0.40 FAR.

Educational

The Educational land use category includes existing public and private educational facilities. Maximum permitted intensities within this category will be 0.30 FAR.